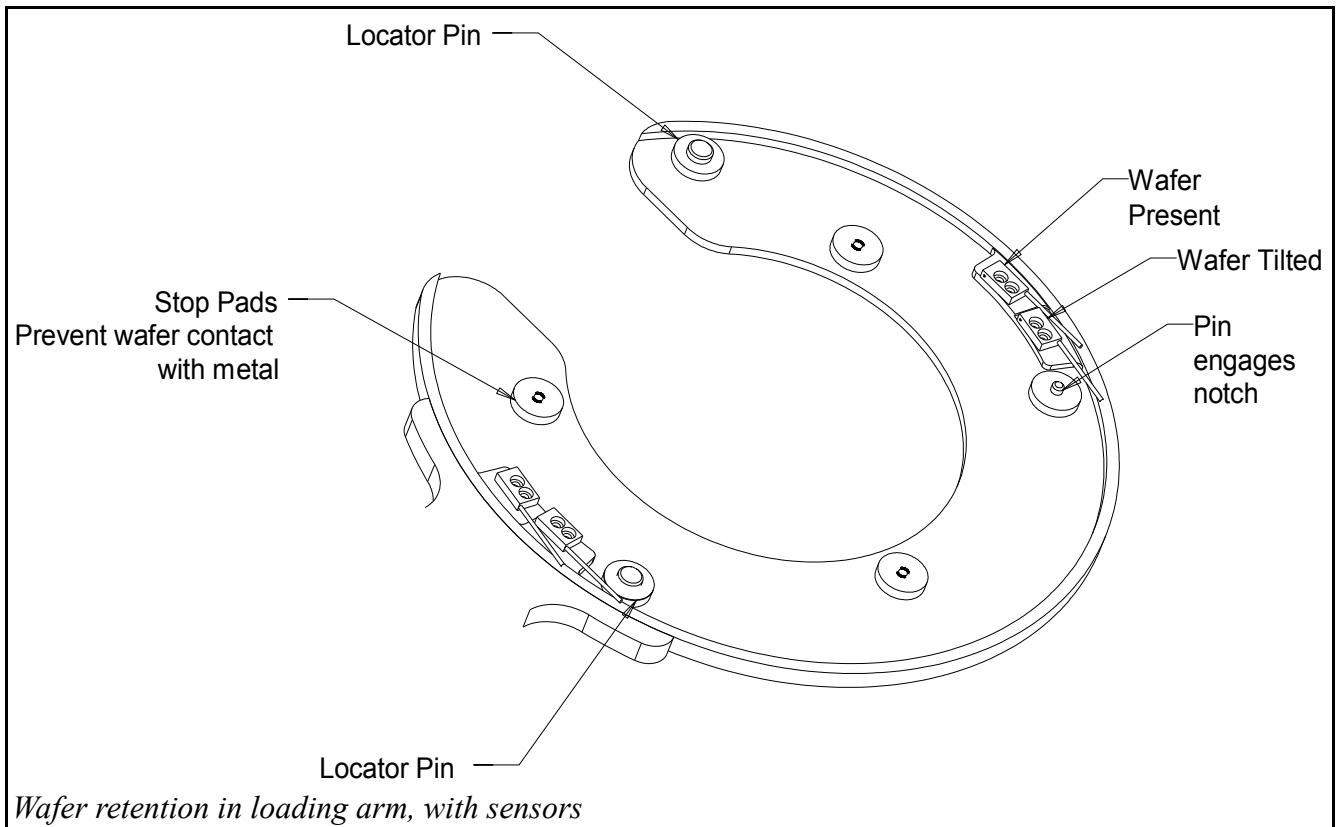


## 1300CSX Wafer Stack Loading Mechanism

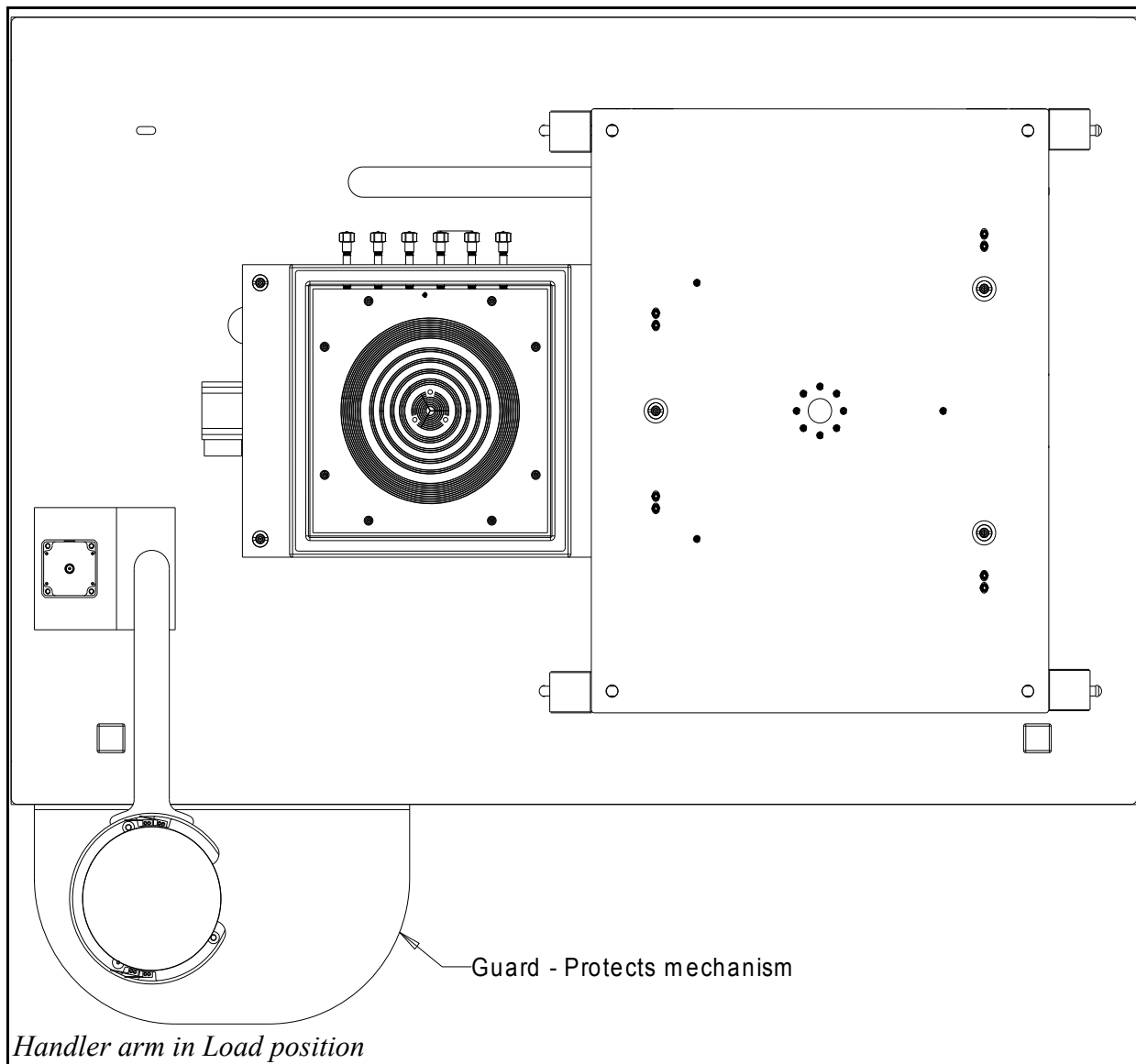
Wafers are placed on a handler arm, which holds the stack in position using PTFE locator pads around the perimeter of the carrier, and restrains its rotation by means of a PTFE pin which engages the notch in the carrier. PTFE stop pads under the perimeter of the stack ensure the wafers and any exposed adhesive contacts non-stick surfaces only. If the wafer stack is tilted, PTFE stop pads will prevent the carrier from touching the metal surface of the loading arm.

Different carriers (e.g., with flats) would require a different configuration. This design uses the 150mm notched carrier as an example.

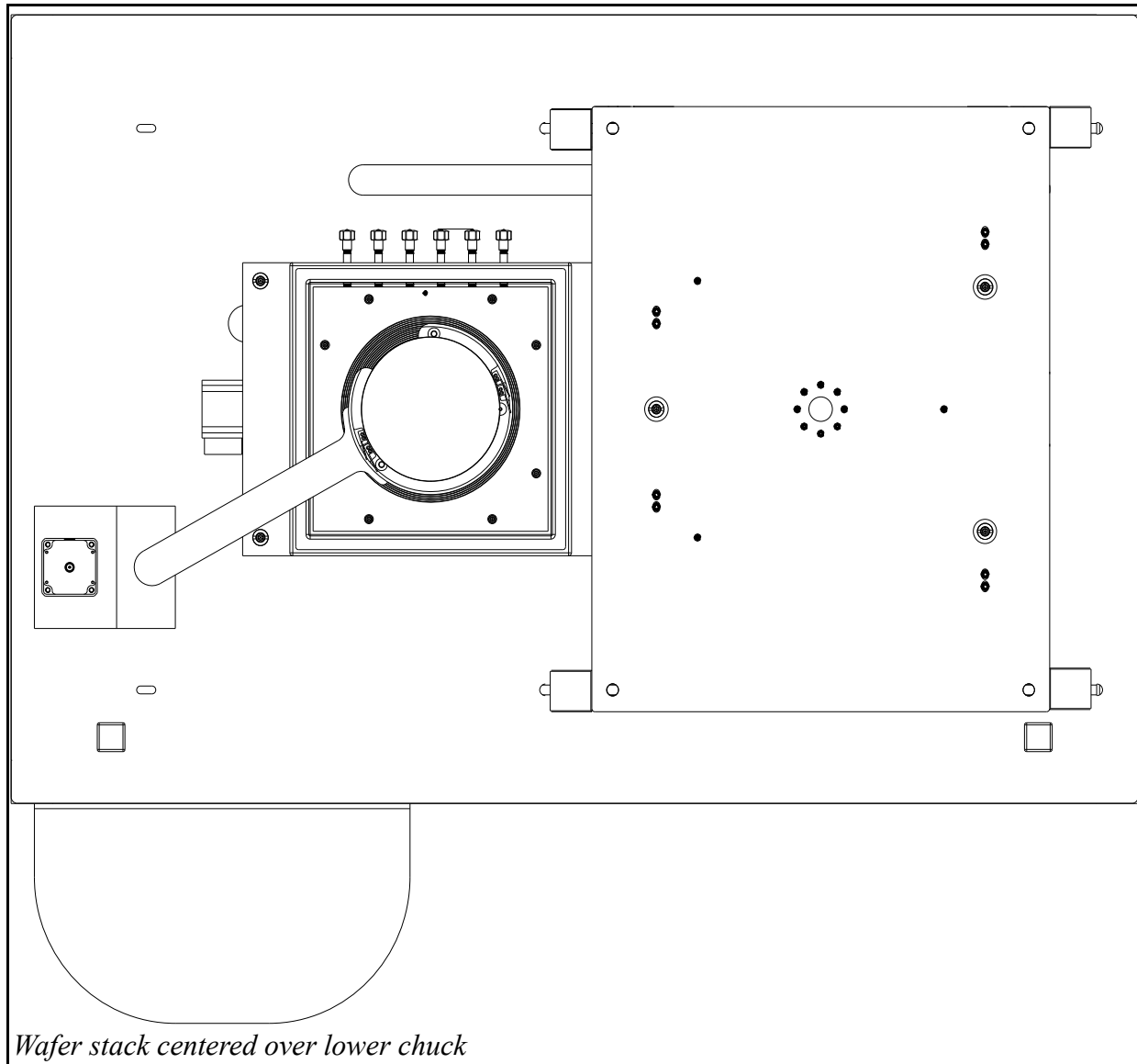
Sensors will detect wafer presence, and whether it is flat in the handler arm. The sensors are a beam-break type, so when the Wafer present beam is broken, it means something is loaded in the loading arm. If the Wafer tilted sensor is blocked, the wafer stack is tilted in the loading arm, which indicates incorrect placement. If the notch is not aligned with the pin, the wafer stack will be tilted, and the process will not continue.



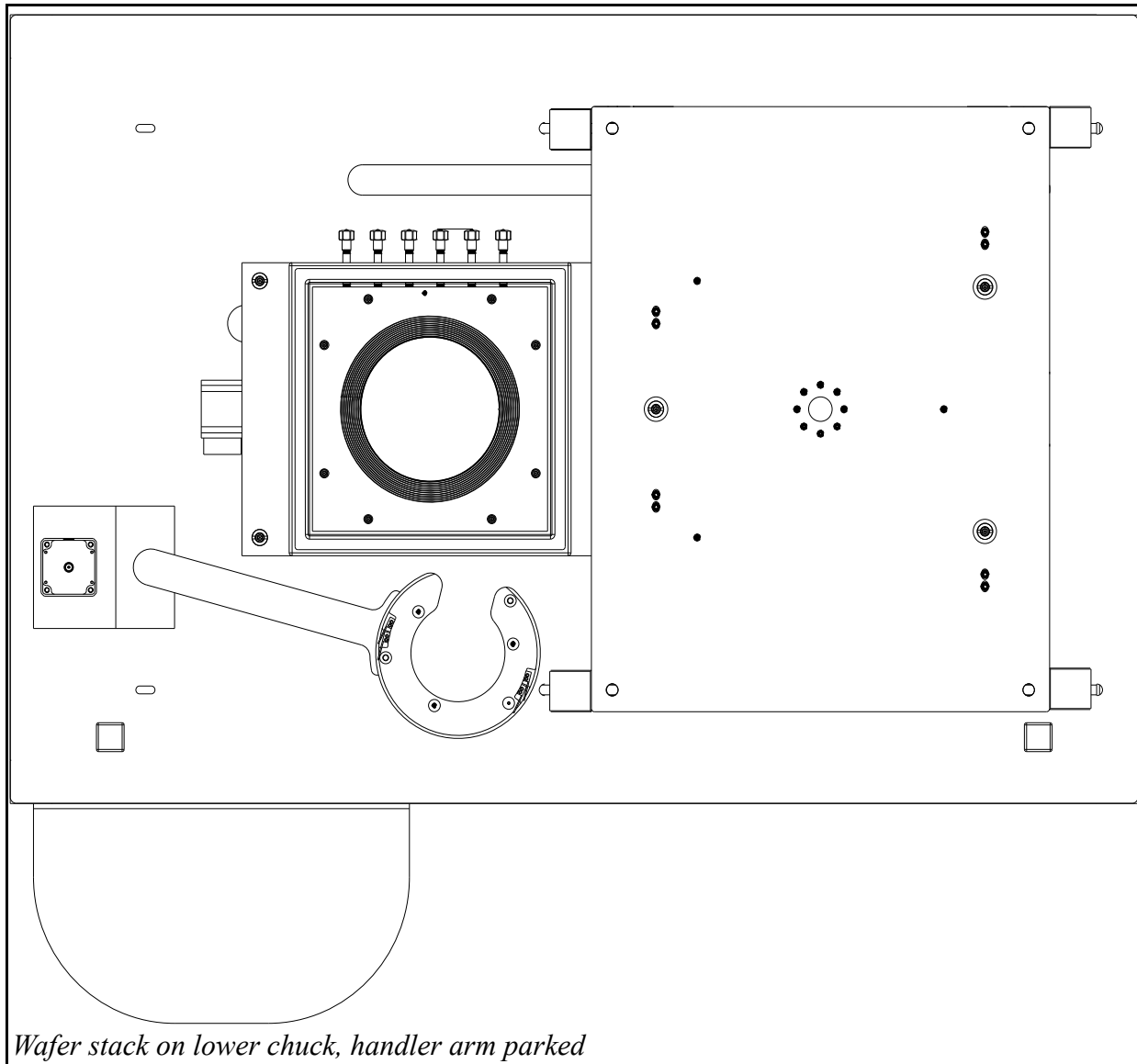
At the beginning of the process, the arm moves to the Load position, and the user is prompted to place the wafer in the loading arm. When the sensors detect a wafer is present, and not tilted in the loading arm, the user will be prompted to start the process.



The arm will move to the center of the chuck. The loading mechanism will position the wafer in the correct location, within 200 microns. The lift pins will rise, lifting the wafer stack out of loading arm.



The loading arm will move to the Park position, and the debonding process will continue as it always has.



At the end of the process the loading mechanism moves to the center of the chuck and unloads the carrier wafer from the raised lift pins to the load position. There is no guarantee that the notch in the carrier wafer will align with the pin in the loading arm pocket, but this will not affect the ability to retrieve the carrier wafer.

To use a different size carrier, only the arm portion (including the sensors) would be replaced. A positive location mechanism at the attachment to the rotary shaft will eliminate the need to readjust the loading arm position when changing loading arms.