



# HORIZONTAL SLIDING DOOR CONFIGURATION FOR BULK CAGE & RACK STERILIZERS

## Horizontal Sliding Door

This design consists of a solid 316L S/S inner plate and external carbon steel structural I-beams with outer channels to form the door. The door is suspended, via slide assemblies, from a heavy-duty supporting gantry positioned above the door. The gantry spans the entire travel of the door and is supported at the outermost area with a vertical support beam. The door is moved to the closed and open positions via a direct drive pneumatic cylinder. A safety strip is mounted on the leading edge of the door to stop the door if an obstruction is encountered. Sliding of the door requires a small amount of air pressure < 20 psig. Once the door is moved into position behind the retaining blocks, compressed air is applied behind the gasket, pushing it against a machined sealing surface on the doorplate, to create the seal. The gasket-retaining groove consists of a solid stainless steel block that has been welded to the end of the autoclave, milled flat, and then a precision groove machined into it. This ensures that a true retaining groove is provided for the door seal. For door unsealing, a vacuum is drawn behind the gasket, pulling it back into the groove, and away from the door-sealing surface. The door gasket is a round silicone rubber extrusion. The door is retained on two vertical sides with the locking mechanisms clearly visible, in accordance with the ASME Code. This design has been used on chamber cross sections as large as 153" W x 84"H.

## **Application**

The Horizontal Sliding Door is a good choice for applications where loads can be staged in front of the door and facility space is available for the door to slide open.



Horizontal sliding door slide assembly & pneumatic cylinder



Horizontal sliding door slide assembly & pneumatic cylinder



Horizontal sliding door autoclave on factory floor



Pneumatic cylinder & support post



Pneumatic door control valves



Horizontal sliding door autoclave installed @ site



Door retaining block & gasket in machined groove



Door block & leading edge safety sensor