

The basic types of mechanical wedge grips are two. In both cases the gripping members move and wedges remain stationary while it is clamped on the sample, or wedges move tightening the sample and bodies of the handles remain stationary.

The “simple” wedge grips are slightly easier to fabricate and thus are slightly less expensive. When vertical space in the load frame is limited, or when the test should be performed in an oven or environmental chamber, there are enormous advantages in their use. As simple wedge grips have no handles, their combined length is significantly lower. The “simple” wedge grips, have the potential of accidentally putting the tensile specimen into compression during installation , possibly damaging it as the second grip is tightened. it may be possible to grip the upper end of the test specimen and then disconnect the lower grip from the testing machine while engaging the specimen. In this way it avoids the potential problem.

As a loading is applied to the test specimen, the wedging action takes over, to grip the specimen in proportion to the magnitude of the load being applied, just as for a standard grip.