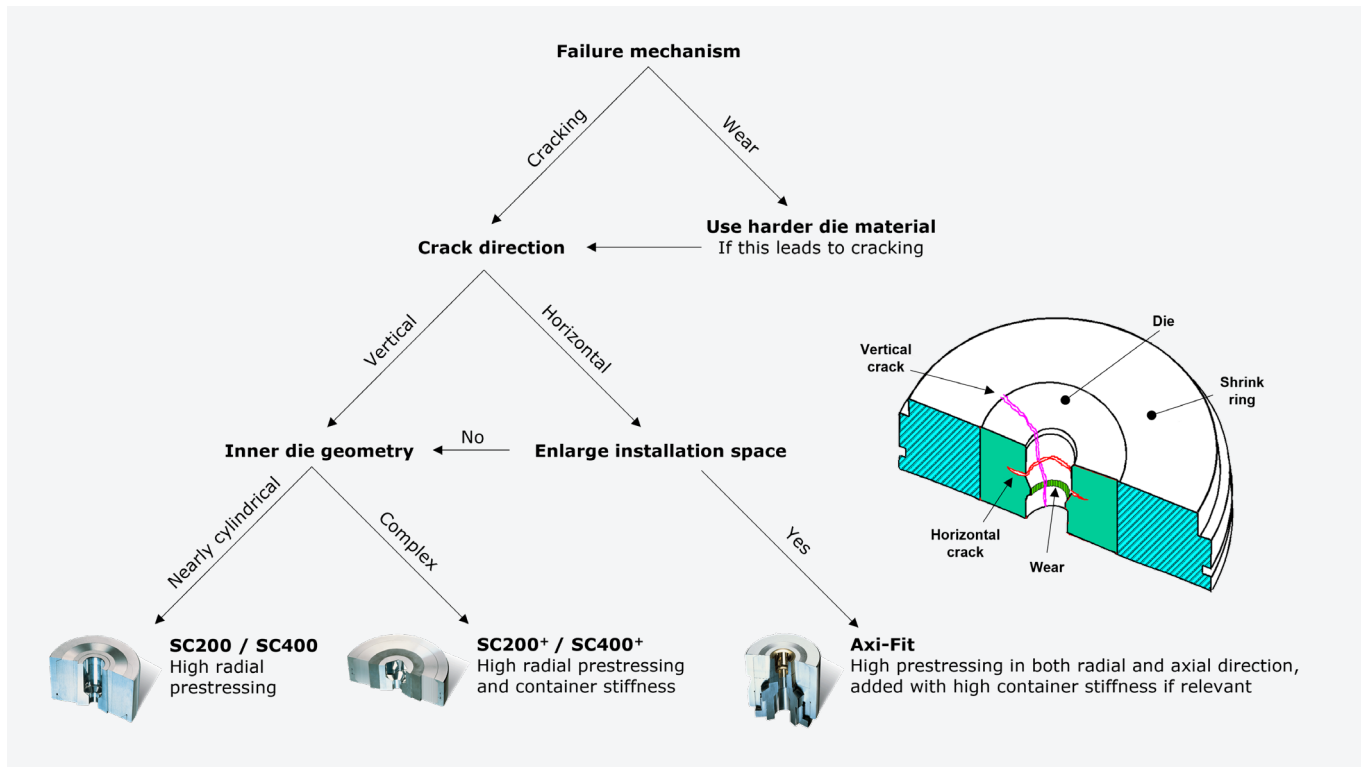




How to Select: Different Prestressing Tool Solutions



High stiffness for complex dies

Complex dies benefit especially from high stiffness of the prestressing system. The reason is a notch effect occurring at sharp corners leading to stress peaks. Therefore, the applicable prestressing is limited by the compressive die strength, and the process stresses should be decreased by restricting the die deflection during forging with a higher container stiffness. If relevant, high stiffness can also be integrated in Axi-Fit containers with axial prestressing.

Space restriction

The installation space represents a restriction for the choice of prestressing system. The necessary space increases from SC200 to SC200+ to Axi-Fit. If the theoretically ideal solution cannot fit into the tooling, other prestressing solutions should be applied. Both SC200 and SC200+ can also help to reduce axial stresses leading to horizontal tool cracks, and SC200 containers can still give a benefit for complex dies in comparison to single or double ring systems.

Tool temperature

The difference between the SC200 and SC400 container systems is the temperature resistance. The strip material is either stable until 200°C or 400°C. That means that Strip200 should be used in applications, where the container temperature does not exceed 200°C, and Strip400 consequently for applications with a temperature below 400°C. Please note that this limit corresponds to the container temperature, and not the billet or die temperature.