

OPA-SWING CHUCK

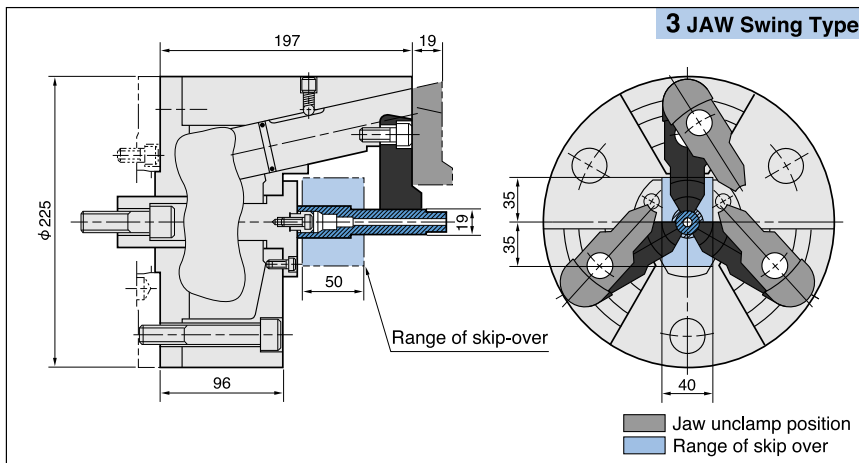
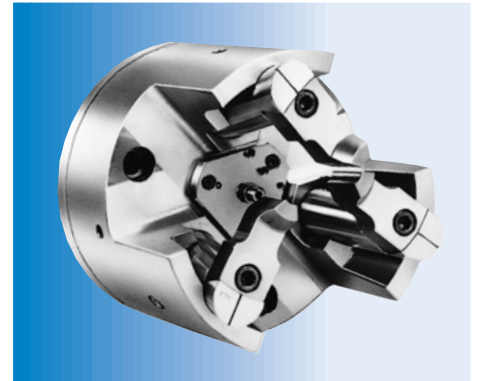
Swing Action Pin-Arbor Chuck

Skip-Over Clamping for Irregular-Diameter Workpieces.

The OPA-Swing Chuck is designed to clamp irregular-diameter of the work-pieces in large-volume production. This new chuck features a swing-clamping function in the jaws of the OPA chuck, O.D. clamping high-precision Pin Arbor Pull Back chuck, in order to skip-over the larger diameter end face of the work-pieces and accurately hold the proper smaller-diameter clamping portion. The entire chuck design including the swing direction and angles can be determined according to individual work-pieces and conditions of operation. Also, not only skip-over clamping function, but also it is possible to insert the work-pieces from the side of the chuck, which allows to give you a wide range of options to chose the automatic work-pieces loading methods.

Practical example 1

The chuck is making skip-over movement over the edge of work-piece length (dimension 70 X 23) to clamp $\Phi 19$. In order to pass over the 3.5 times bigger dimension portion, each jaw has their own turning angle and direction, and also the jaw of No.1 turns earlier than the other 2 jaws to prevent contact with each other. The edge of work-piece length (tolerance H7) is bore by the stop with boss. The required concentricity is within 0.03 T.I.R. The required rotation speed is 3,500 min⁻¹. And the work-piece un-balance is corrected dynamic balance by locating the work-piece. The actuator travel is set as 27 mm, and it is possible to use general rotating cylinders of stroke value 30 mm.



Practical example 2

Install the work-piece having the insertion portion $\Phi 70$ and the clamping portion $\Phi 30$ from the side of the chuck and roughly locate by the guide. Then the chuck clamps the work-piece by "pull-back" action. The insertion portion is bore by the spring center with the end face standard and the required concentricity after the operation is 0.01 T.I.R. With swinging 2 portions of the jaws as below picture and using a loader not to interfere with the jaws, have the insertion portion pass over $\Phi 30$ clamping portion to the rough locating base. The actuator travel is 22 mm, and it is possible to use general rotating cylinders.

