



1 MACHINE TYPE

Identify the type of machine the chuck will be used on: lathe, table or indexer? Got a special application? We can help!



2 CHUCK TYPE

Identify the type of a chuck that will work best for the application.

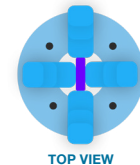
Scroll (Self-Centering)

Jaws move together or self-center around the workpiece. Offers accuracy and convenience for jobs using round bar stock and requiring frequent changeovers. Scroll chucks come with 2, 3, 4 & 6 jaws. Scroll chucks can be ordered as direct mount for the most popular spindle types or as plain back with an adapter to go on a lathe or a baseplate for table or indexer applications.



Independent

Jaws move individually. Used in applications where the work piece is irregular in shape, or where the highest level of accuracy is required. Independent chucks come with 4 jaws. Independent chucks can be ordered as direct mount or plain back with an adapter.



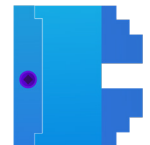
Combination (Scroll + Independent)

A combination of a scroll and independent chuck. It allows jaws to either move simultaneously or independently. This design allows the operator to grip irregular-shaped parts with more convenience than independent (but with marginally less accuracy). Combination chucks come with 3 & 4 jaws. Combination chucks are plain back only and can be matched with adapters and baseplates for mounting on lathes, tables, or indexers.



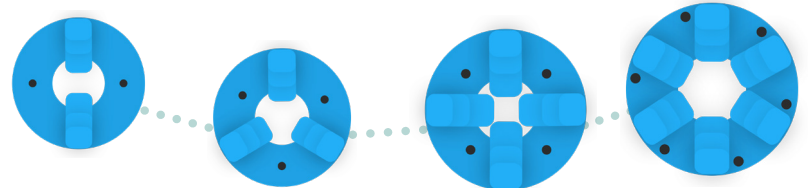
Adjustable

Also known as fine adjustment, tech tru, set tru, zero set, etc. An adjustable chuck is a scroll chuck with fine adjustment screws, which move the chuck against a special adapter (or a baseplate) to "zero in" the TIR. Adjustable chucks come with 2, 3, 4 & 6 jaws. Adjustable chucks are flat back only, and are matched with adapters and baseplates for mounting on lathes, tables, or indexers.



3 NUMBER OF JAWS

- Scroll chucks come with 2, 3, 4 or 6 jaws
- Independent chucks are always 4 jaw
- Combination chucks come with 3 or 4 jaws
- Adjustable chucks come with 2, 3, 4 or 6 jaws



4 CHUCK BODY MATERIAL

Semi-Steel (Cast Iron)

- Medium duty applications
- Affordable (about 30-40% less expensive than Forged Steel)
- Accuracy diminishes at a faster rate than Forged Steel

Forged Steel

- Medium to heavy-duty applications.
- Durable - accuracy is retained up to 3 times longer than Semi-Steel body chucks
- About 30-40% more expensive than Semi-Steel option

Cast-Steel

- Medium to heavy duty applications.
- Usually reserved for larger diameter scroll and independent chucks

5 CHUCK MOUNTING

Plain Back

Always requires an adapter or baseplate. This provides flexibility to use the same chuck on a number of machines.

Baseplates are for table & indexer applications. Here, the baseplate is first mounted on the table (or indexer) and then the chuck is mounted on the baseplate.

Adapters are for lathe applications, where the adapter is first attached to the chuck and then the chuck and the adapter are mounted on the lathe. In most cases, the adapter for plain back chucks must be machined to match the chuck mounting dimensions. Additionally you may also need to drill and counter bore the mounting holes in semi-machined adapters.

Adjustable chucks are an exception, as they always use fully-machined adapters or baseplates.

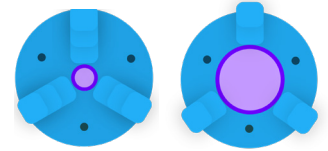
Direct Mount

Direct mount is used for lathe applications only. With the adapter integrated into the chuck, direct mount chucks provide convenience and ease of initial setup. No additional machining is required. Recommended for lathes where spindle run out is close to zero.



6 THRU-HOLE

The size of the thru-hole is a critical consideration for applications where the material/bar stock must feed through the chuck and spindle thru-hole.



7 TYPE OF JAWS

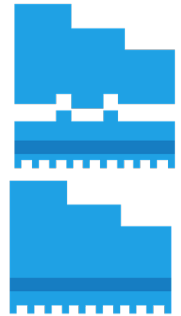
Reversible (2-Piece)

Allows you to use a variety of soft or specialty jaws, offering more versatility and convenience. Changing from an ID to OD application is as simple as unbolting the top from the master jaws, inverting them, and reapplying the bolts.

Hard Solid (1-Piece)

Provide more rigidity & accuracy but will require more time to convert from OD to ID gripping.

Scroll & Adjustable chucks require a second set of jaws to convert from ID to OD, while Independent & Combination chucks are supplied with just one set of hard solid reversible jaws that work for both ID and OD applications.



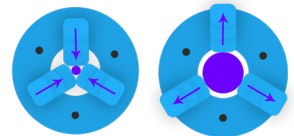
8 LOAD CAPACITY



Before operating the chuck, make sure it is rated to handle the weight of the workpiece. Load capacities are available for supported and unsupported applications. Please contact Global Tooling Solutions (see contact info below) for load capacity information.

9 CLAMPING RANGE

Operating a lathe chuck outside of the MIN/MAX Clamping Range could pose a serious safety threat, and damage the chuck. More info can be found in the Gator product catalog.



10 RPM



All manual lathe chucks have a listed Maximum RPM rating. Exceeding this rating could create a serious safety risk and damage the chuck.

11 FRONT MOUNT APPLICATIONS

Scroll chucks are available in Back Mount (using an adapter for lathe applications), or Front Mount for table applications (with, or without a baseplate).

* CUSTOM SOLUTIONS

Do you have a special application that is not covered in this Chuck Selection Guide? Gator specializes in custom applications. We can supply a chuck for any configuration or application that you need a solution for. We specialize in large diameter solutions.