Standard Chucking Mechanisms
**Standard Workholding Mechanisms**

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Chuck Styles

- For use with spindle adapters providing stir-around feature
- Supplied for manual or drawbar actuation

Standard Chucking Assembly
Chuck Styles

Locator Assembly

- For fixed position workholding
- Supplied for manual or drawbar actuation
Chuck Styles

- For between-center workholding

Between-Center Mandrel Assembly
Taper Styles

- For parts requiring radial-grip force with pull-back action for location

Single Taper
Taper Styles

- Double Taper

For longer or multi-step parts where radial-grip force with pull-back action for location is required.
Taper Styles

- For parts requiring radial-grip force and dead-length positioning

Reverse Taper
Applications

- Turning
- Milling
- Grinding
- Inspection Work
- Hobbing
- Fixture Work
- Most Second Operation Processes

*Versatility At a Reasonable Price*
Standard Chucking Assemblies

- Single Taper
- Double Taper
- Reverse Taper
Standard Locator Assemblies

- Single Taper
- Double Taper
- Reverse Taper
Between Center Mandrels

Single Taper

Double Taper
Consider Single Taper Use for:

- Through Bores
- Virtually All Second Operations

Points to Consider

- Stop Faces Should be Square
- Bores Should be Reasonably Straight
- Short Parts Should be Chucked Over Center of Part
CORRECT METHOD OF GRIPPING SHORT PARTS POSITIONING PART OVER CENTER PORTION OF COLLET

THIS GRIPPING METHOD ALLOWS COLLET TO MOVE OUTWARD AT SKIRT END, THUS CAUSING DISTORTION AND BREAKAGE

IF WORKPIECE MUST BE GRIPPED ON OUTER END, UTILIZE RESTRICTOR RING TO CONTAIN AND PROTECT COLLET
Consider Double Taper Use for:

- Shallow or Blind Bores
- Bores with Slight Tapers
- Stepped Bores

Points to Consider

- Stop Faces Should be Square
- Collet Tapers Should be Covered
- Automatic Load Applications Can Create Release Problems

*If in Question, Contact Speedgrip Engineering*
WHEN GRIPPING SHORTER PARTS, POSITION PART TO ASSURE SOLID CHUCKING OVER BOTH TAPERS

USE OF DOUBLE TAPER DESIGN ALLOWS MAXIMUM GRIPPING IN COUNTERBORES OR BLIND HOLES

INCORRECT METHOD OF GRIPPING SHORT PARTS, LEAVING TAPERS UNSUPPORTED ALLOWING COLLET TO DISTORT AND BREAK
Consider Reverse Taper Use for:

- Pull-Back Action Might Distort Thin Section Piece Parts
- Other Objections to Pull-Back are Present

Points to Consider

- Absence of Pull-Back Action Reduces Driving Ability
- Occasional Release Problems May Occur

*If in Question, Contact Speedgrip Engineering*
It is highly recommended that Speedgrip Chuck be consulted on all applications involving the reverse taper principle.

Reverse taper chucking is ideal when thin piece parts must be chucked and no distortion due to “pull-back” can be tolerated. The absence of this “pull-back”, however, results in substantially decreased driving power. In all reverse taper applications, it is highly advisable to supplement collet chucking with some form of face plate driver, pin, block, etc.
Speedgrip “Safety Collar System”
**Standard Collet Attributes**

**Single Taper Collets**
- Least Expensive
- Most Readily Available  (stocked finished with unground OD and open slots)
  * Note - single taper chucks and locators are stocked thru size #8

**Double Taper Collets**
- Inexpensive
- Readily Available  (stocked finished with unground OD and un-slotted)
- Clearance for Shallow Bore Parts
- More Expansion than Single Taper
- Longer Size Collets Available
  * Note - double taper chucks and locators are non-stocked and are built as needed

**Reverse Taper Collets**
- Same as single taper just used differently
  * Note - reverse taper chucks are non-stocked and are built as needed
Mounting Spindle Adapters and Chucks to Spindles
MACHINE SPINDLE

ADAPTER

CHUCK MOUNTING SURFACE

CONNECTOR

DRAG TUBE

- INSPECT MACHINE SPINDLE (TO BE CLEAN AND FREE OF BURRS)
- MOUNT ADAPTER AND SECURE MOUNTING SCREWS
- INDICATE CHUCK MOUNTING SURFACE AND RE-MACHINE IF NECESSARY FOR SQUARENESS
- Mount nose assembly, tightening chuck mounting screws to snug only.
- Alternately indicate nose or nose taper and adjust (4) stir-around screws until assembly is running concentric.
- Secure chuck mounting screws tightly.
- Re-indicate, if concentricity has changed. Re-adjust stir-around screws and re-tighten chuck mounting screws.
- Assemble Collet, Drawscrew Collar, and Drawscrew. Check to determine that Collet is properly orientated over keys, when assembling Drawscrew, thread (Do not push) thru Drawscrew Adjustment Retainer Assembly.
- Actuate machine Drawtube to full forward position.
- Thread Drawscrew into Drawtube connector and to a position where Collet is relaxed, yet snug on taper.
Standard Self-Contained Actuators

- Provides chucking pressure for any size Speedgrip standard chuck
- Spring chuck with air or hydraulic release
- Adaptable to lathe spindles or machining centers
- In stock for immediate delivery (C-8358 & C-8360 models)

Models now available to accept JF locators (C-10479 thru C-10482)
Self-Contained Actuator

Models to accept 4”, 6”, 10” & 13” flange size chucks
Self-Contained Actuator

Models to accept all JF locator sizes