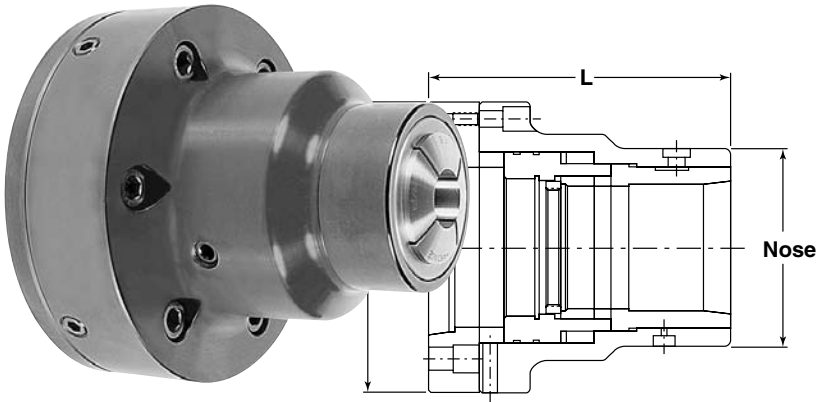


HARDINGE®

INSTALLATION BOOKLET FOR:



**Dead-Length® Collet Adaptation Chucks
Draw Collet**



Read the enclosed instructions and
recommendations before any installations

CONTENTS

Dead-Length® Collet Adaptation Chucks – Draw Collet

Table of Contents

- Pg. 3-4 • Mounting Instructions
- Pg. 5 • Parts List/ Trouble Shooting Guide
- Pg. 6 • Part Ejector (5C-DL, 16C-DL & 3J-DL)
- Pg. 7 • Part Ejector (S20-DL, S26-DL, S30-DL & S35-DL)
- Pg. 8 • Part Ejector (22J-DL)
- Pg. 9 • Part Stop
- Pg. 10 • Style "S" Collet Pads Installation Instructions
- Pg. 11 • Care & Maintenance Guide
- Pg. 12 • Warranty & Return Procedures

Box Contents

- Mounting Plate
- Mounting Hardware
- Collet Chuck Assembly
- Drawtube Adapter (*DTA*)
- Part Stop / Ejector (*separate purchase*)
- Master Collet (*for style "S" system only*)

Bonus Package:

- * Collet Wrench
- * "O" Ring Seals
- * Collet Sleeve Anti-Rotation Screw
- * Spline Wrench (*for style "S" system only*)
- * Pad Clamp Assembly (*for style "S" system only*)
- * Chip Protection Wrap (*for style "S" system only*)

For Parts and Service Call:

PH: (800) 843-8801 In Canada: (800) 468-5946

Other: (607) 734-2281 Fax: (607) 734-3886

Mounting Instructions For: Dead-Length® Collet Adaptation Chuck – Draw Collet

For American Standard and Select Flat-Nose Spindles

1. Remove the existing chuck, fixtures and any face plate attachments. Thoroughly clean the mounting surface of the spindle free from any chips or debris.
2. Clean both spindle side and chuck side of the mounting plate.
3. For shipping purposes, the drawtube adapter may already be threaded into the collet actuator. Make sure that the drawtube adapter is completely tightened into the collet actuator. If the drawtube adapter is shipped unassembled with the system or packaged separately, place the collet chuck assembly down, mounting flange end up, thread the drawtube adapter into the collet actuator, completely tighten.
4. Clean plate bore of chuck after installing the drawtube adapter.
5. **AMERICAN STANDARD SPINDLES:**
Line up the machine's drive pin, located on the machine's spindle, with one of the drive pin holes on the mounting plate. Place mounting plate on the machine's spindle. Secure mounting plate to the machine's spindle with supplied mounting bolts. Install and completely tighten the mounting bolts in an alternating sequence, (criss-cross).

SELECT FLAT -NOSE SPINDLES:

Most select flat-nose spindles **WILL NOT** have a drive pin located on the machine's spindle or a drive pin hole located on the collet chuck mounting plate. **For select flat-nose spindles, do not completely tighten mounting bolts, this allows the mounting plate to be properly indicated to the spindle. With a .0001" dial indicator, indicate the mounting plate into the machine's spindle to have a zero TIR. Once properly adjusted and indicated, completely tighten the mounting bolts.**

6. Extend the machine's drawtube to the forward/open position.
7. Turn the machine's drawtube pressure down just enough to actuate the system.
8. Place the collet chuck assembly (body and drawtube adapter) onto the machine's drawtube, turning clockwise. Just before the assembly is fully threaded onto the drawtube adapter, turn back the collet chuck assembly to the nearest bolt hole location on the mounting plate.
9. Retract the machine's drawtube, making sure all mounting holes are aligned.

Continued . . .

Mounting Instructions – Cont'd

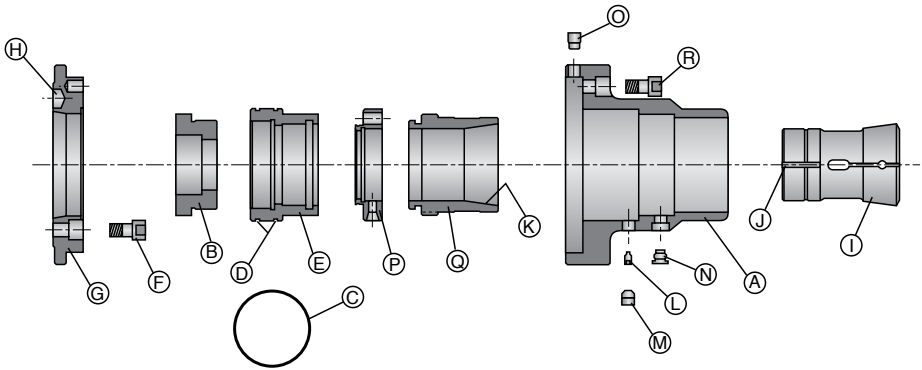
10. Install all the mounting bolts firmly (finger tight). **DO NOT** completely tighten. This allows the collet chuck assembly to be properly adjusted and indicated to the machine's spindle.
11. **STANDARD BODY SYSTEMS (A2-6, A2-8, A2-11 & 140mm spindle mounts):**
To ensure proper installation, place a dial indicator on the OD of the collet chuck nose. Use the four adjusting screws to adjust and indicate the collet chuck to the desired TIR.
- SMALL BODY SYSTEMS (A2-4, A2-5 & 115mm & smaller spindle mounts):**
To ensure proper installation, place a .0001" dial indicator on the OD of the collet chuck nose. Tap the collet chuck body with a rubber mallet to adjust and indicate the collet chuck to the desired TIR.
12. Fully tighten all the mounting bolts in an alternating sequence (crisscross). Use your indicator to maintain desired TIR when fully tightening.
13. Look into the collet bore of your chuck. Determine that all three anti-rotation screws are not obstructing the bore. If a screw is obstructing the bore, identify the screw causing the obstruction. Place a $\frac{5}{32}$ allen wrench ($\frac{3}{32}$ for 5C-DL) into the through-hole provided in the collet retainer screw. Turn the allen wrench counterclockwise to back out the anti-rotation screw ensuring the collet bore is unobstructed.
14. Thread the collet into the collet chuck body with a Hardinge collet wrench, until the collet stops (completely threaded into the collet retainer).
15. Place the correct allen wrench into the through-hole provided in the collet retainer screw. Turn the wrench clockwise until the anti-rotation screw contacts the collet threads; **DO NOT OVER TIGHTEN** the anti-rotation screw. Repeat this step on all the anti-rotation screws.
16. Set the machine for ID chucking. Insert the workpiece into the collet then actuate the drawtube. Adjust the machine's drawtube pressure to the desired pressure needed to hold the workpiece.

**NEVER ACTUATE THE SYSTEM
WITHOUT A WORKPIECE IN THE COLLET**

Dead-Length® Systems

Key	Description	Qty.
A	Collet Chuck Body	1
B	Drawtube Adapter	1
C	"O" Ring	2
D	"O" Ring Grooves	2
E	Collet Actuator	1
F	Mounting Bolt	6
G	Mounting Plate	1
H	Drive Pin Hole	1
I	Collet/Master Collet	1

Key	Description	Qty.
J	Collet Anti-Rotation Slot	1
K	Collet Closing Taper	1
L	Anti-Rotation Screw	3
M	Collet Retainer Screw	3
N	Anti-Rotation Screw	1
O	Adjusting Screw	1
P	Collet Retainer	1
Q	Closing Sleeve	1
R	Mounting Bolt - Chuck Body	6



Trouble Shooting Guide

Workpiece moves in collet:

- 1) Incorrect collet size in relation to workpiece diameter.
- 2) Hydraulic actuator pressure too low.
- 3) Dull cutting tools.
- 4) Chip build-up in system limits stroke.

Collet won't close:

- 1) Actuator not properly engaged with closing sleeve.
- 2) Hydraulic actuator pressure too low.
- 3) Actuator not working properly.
- 4) Drawtube adapter not completely tightened into the collet actuator.
- 5) Machine parameters not switched for ID chucking.

Collet sticks in closed position:

- 1) Hydraulic actuator pressure too low.
- 2) Bearing diameter at rear of collet excessively out of round.
- 3) Debris build-up in system.
- 4) Chip accumulation between collet retainer and closing sleeve.

Parts run out (TIR):

- 1) Chuck not indicated properly.
- 2) Mounting surfaces not clean.
- 3) Burr on chuck or spindle.
- 4) Mounting bolts are loose.
- 5) Debris build-up on collet closing surfaces.

Part Ejector

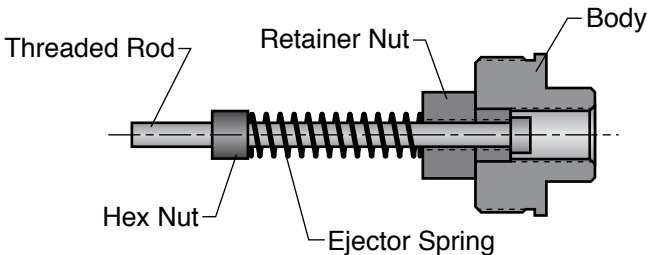
Installation Instructions for:

Dead-Length® Draw Collet 5C-DL, 16C-DL & 3J-DL & Pullback Systems 5C, 16C & 3J

1. Insert the **threaded rod**, threaded end first, into the threaded end of the **retainer nut**.
2. Place the **ejector spring** around the **threaded rod** until it bottoms out against the face of the **retainer nut**.
3. Compress the **ejector spring** against the **retainer nut** until the threads of the **threaded rod** are exposed.
4. Holding down the spring, insert one **hex nut** over the pilot end of the **threaded rod** until it contacts the threads. Thread the **hex nut** to the desired operation tension.
5. Once the desired operation tension is obtained, thread the second **hex nut** onto the **ejector rod**, until flush with the first, locking them both in place.
6. Screw the threaded end of the part ejector assembly into the flat surface end of the **body**.
6. Screw the part ejector assembly into the internal threads of the collet at the back portion of the collet. Tighten completely.

Part Ejector Contents:

- **Body**
- **Threaded Ejector Rod**
- $\frac{5}{16}$ " -18 Hex Nut (2)
- $\frac{3}{4}$ " Retainer Nut ($\frac{9}{16}$ "-18 Thread)
- **Ejector Spring**



Part Ejector

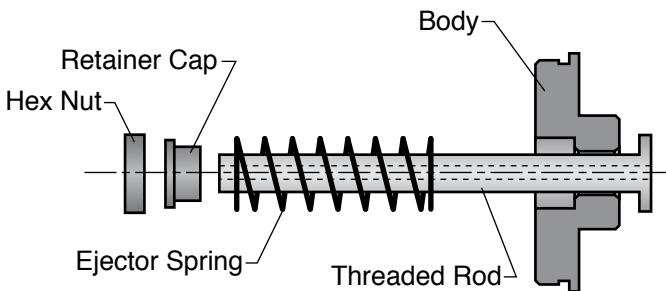
Installation Instructions for:

Dead-Length® Draw Collet S20-DL, S26-DL, S30-DL & 35J-DL

1. Insert the **threaded rod**, threaded end first, into the threaded end of the **retainer nut**.
2. Place the **ejector spring** around the **threaded rod** until it bottoms out against the face of the **retainer nut**.
3. Compress the **ejector spring** against the **retainer nut** until the threads of the **threaded rod** are exposed.
4. Holding down the spring, insert one **hex nut** over the pilot end of the **threaded rod** until it contacts the threads. Thread the **hex nut** to the desired operation tension.
5. Once the desired operation tension is obtained, thread the second hex nut onto the ejector rod, until flush with the first, locking them both in place.
6. Screw the part ejector assembly into the internal threads of the drawtube adapter and tighten.

Part Ejector Contents:

- **Body**
- **1/2"-20 Threaded Ejector Rod**
- **1/2"-20 Hex Nut**
- **Spring Retainer Cap**
- **Ejector Spring**



Part Ejector

Installation Instructions for:

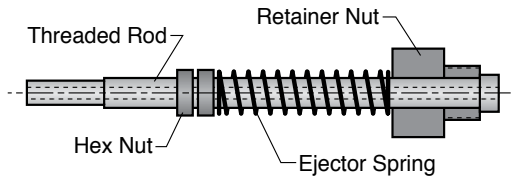
Dead-Length® Draw Collet 22J-DL

Dead-Length® Stationary Collet DL-21, DL-22 & DL-42

1. Insert the **threaded rod**, threaded end first, into the threaded end of the **retainer nut**.
2. Place the **ejector spring** around the **threaded rod** until it bottoms out against the face of the **retainer nut**.
3. Compress the **ejector spring** against the **retainer nut** until the threads of the **threaded rod** are exposed.
4. Holding down the spring, insert one **hex nut** over the pilot end of the **threaded rod** until it contacts the threads. Thread the **hex nut** to the desired operation tension.
5. Once the desired operation tension is obtained, thread the second hex nut onto the ejector rod, until flush with the first, locking them both in place.
6. Screw the part ejector assembly into the internal threads of the drawtube adapter and tighten.

Part Ejector Contents:

- Threaded Ejector Rod
- $\frac{5}{16}$ " -18 Hex Nut (2)
- $\frac{3}{4}$ " Retainer Nut ($\frac{9}{16}$ " -18 Thread)
- Ejector Spring



Part Stop

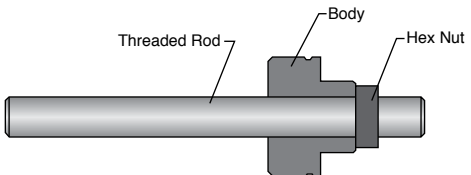
Installation Instructions for:

All Dead-Length® Draw Collet Systems
(5C, 16C & 3J)

1. Thread the **body** into the internal threads of the collet* at the back portion of the collet. Tighten completely.
2. Thread the **threaded rod** into the wrench lug end of the **collet cap**, threading it to the desired depth of the workpiece.
3. Thread the **hex nut** onto the **threaded rod** until it bottoms out against the wrench lug end of the **body**. Tighten completely.

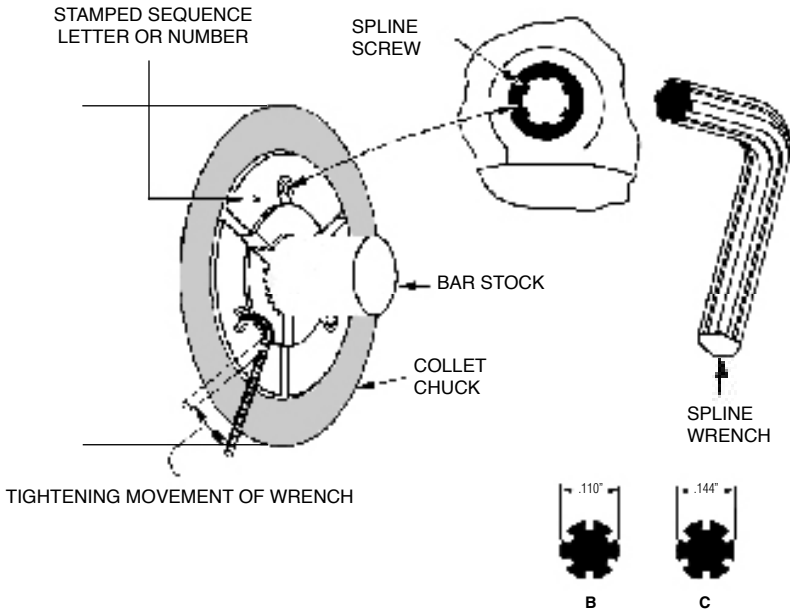
Part Stop Contents:

- Body
- $\frac{9}{16}$ " -18 Hex Nut
- $\frac{9}{16}$ " -18 Threaded Rod



* NOTE: 35J-DL (COLLET CAP THREADS INTO THE COLLET RETAINER)

Installation Instructions for: Style "S" Collet Pads



Thread the master collet into the Hardinge collet chuck. Place one collet pad into the pad clamp assembly (dovetail side first). **With the proper spline wrench**, tighten pad clamp securely by using firm finger pressure on spline wrench as shown in illustration. Install the remaining collet pads in the same fashion, being sure they are in alphabetical or numerical sequence. When tightening spline screw it is not necessary to use an extension on the spline wrench. Place part or feed bar stock into the master collet and grip the stock using the proper tension. **Note: Always clean the collet pads and the master collet before installing pads.**

When removing Sure-Grip® Collet Pads, do not remove pad clamp assembly from the master collet. Loosen the spline screw two turns with wrench; then, with finger pressure, push the pad clamp assembly back into the master collet. This clears the rear clamp dovetail of the master collet from the rear dovetail of the collet pad, enabling the collet pad to be removed.

STANDARD S30 & S16 PULLBACK MASTER COLLETS HAVE LEFT HANDED THREADS

Care & Maintenance

Store all Hardinge collet chucks in a clean, dry environment when not in use

Style "C" & "J" Pullback Systems

- 1) Thoroughly clean the closing tapers of your collet and collet chuck **FREQUENTLY.***
- 2) When changing collets, ensure that all threads are clean and free from any debris.
- 3) Remove the collet chuck system **FREQUENTLY,*** wipe it clean and ensure the "O" ring seal(s) on the drawtube adapter are in good working condition.
- 4) When reassembling the collet chuck system, apply a generous amount of all purpose grease to the "O" ring(s) on the drawtube adapter.

Style "S" Pullback Systems

- 1) Thoroughly clean the closing tapers of your master collet and collet chuck **FREQUENTLY.***
- 2) When installing and reinstalling the master collet, ensure that all surfaces are clean and free from any debris. Adjust the master collet, with collet pads installed, approximately .020" - .030" over the diameter size of the desired workpiece.
- 3) When changing collet pads, ensure that all surfaces are clean and free of any debris.
- 4) When installing and reinstalling collet pads, be certain that the collet pads are installed in the same numeric or alphabetical sequence.

Dead-Length® Collet Adaptation Chuck – Stationary Collet Systems

- 1) Thoroughly clean the closing tapers of your master collet/collets and collet chuck closing sleeve **FREQUENTLY.***
- 2) Remove the nose cap, master collet and or collets **FREQUENTLY.*** Clean any debris from the master collet and or collets, closing sleeve, and nose cap.
- 3) When installing and reinstalling the master collet/collets, ensure that all surfaces are clean from any debris.
- 4) Disassemble the collet chuck system **FREQUENTLY,*** or as needed. Replace the "O" Ring(s) located on the collet closing sleeve, then reassemble the system. Be certain all parts are clean from chips and debris.
- 5) Once reassembled check the collet chuck system for proper concentricity.
- 6) Apply a small amount of all purpose grease to the zerk fitting weekly or as needed.

Dead-Length® Collet Adaptation Chuck – Draw Collet Systems

- 1) Thoroughly clean the closing tapers of your master collet/collets, collet chuck closing sleeve, and the collet retainer threads **FREQUENTLY.***
- 2) When installing and reinstalling the master collet/collets, ensure that all surfaces are clean from any debris.
- 3) Depending on the application and system usage, additional maintenance may be required. If the system loses stroke or any such related issue, please contact our applications department for further assistance.

NOTE: IT IS EXTREMELY IMPORTANT TO KEEP THIS SYSTEM CLEAN AND FREE OF CHIPS AND DEBRIS.

Hardinge® - Sjogren Speed Collet Chuck Systems

- 1) Thoroughly clean the closing tapers of your collet and closing sleeve **FREQUENTLY.***
- 2) When changing collets, ensure that all threads of the collet and ring gear are clean and free from any debris.
- 3) Remove the speed collet chuck system **FREQUENTLY,*** wipe the entire system clean from chips and debris.
- 4) Apply a small amount of all purpose grease to the grease fitting weekly or as needed.

Frequency is determined by the production quantities and types of materials used: e.g., brass, aluminum, various steels, etc. The use of these materials may require more frequent maintenance schedules.

Warranty & Return Procedures

1. Warranty Terms:

Hardinge warrants that all Hardinge products are free from defects in material and workmanship for a period of twelve months (1 year) from date of original purchase.

2. Warranty Conditions:

- A. Should abnormal function or damage occur during the warranty period, the abnormal functioning portion or damaged portion of our product will be repaired or replaced without charges to our customer. Hardinge will replace warranted defects, but will not service them on-site.

The following considerations apply:

1. The warranty claim is made to Hardinge within the warranty period.
 2. Hardinge must acknowledge that the abnormal function or damage was caused by fault in material or the manufacturing process.
 3. The product was installed, used and maintained according to specifications of Hardinge and its vendors. See document: (Care and Maintenance of Hardinge Collet Chuck Systems).
 4. The warranty items may be repaired or replaced at the discretion of Hardinge.
 5. The purchaser must call Hardinge to report the warranty claim.
 6. Upon acknowledgment of warranty claim, Hardinge will assign a Returned Merchandise Authorization (RMA) number, and ship a replacement product to the purchaser.
 7. After receiving the replacement product, the purchaser must ship the defective or damaged product back to Hardinge. The purchaser must use the packaging in which the replacement product arrived and clearly mark all returning packages and documents with the assigned RMA number.
 8. All returned items must be properly packed before return shipping. Hardinge is not liable for damaged goods caused by careless or improper packaging.
- B. Should abnormal function or damage occur as a result of incorrect application of the product, non-compliance to Hardinge and or the vendors product specifications, wrong mounting or installation, unauthorized product or modifications, careless handling and so fourth, Hardinge's warranty will not apply.
- C. The loss of accuracy caused by normal wear and tear is not covered by this warranty.

3. Restocking Fee:

- A. A restocking fee may apply if an item is returned due to customer error.

DISCLAIMERS: The foregoing is the complete warranty for the products and supersedes all other warranties and representations, whether oral or written. All other warranties, whether expressed or implied are disclaimed, including, without limitation, any implied warranty of merchantability or fitness for any intended specific use. Under no circumstances will Hardinge be liable to the purchaser, or to any user, for any damages, expenses, lost profits, lost savings, damage to or replacement of equipment and property, costs of recovering, reprogramming, or reproducing any material, or other damages arising out of use or inability to use the Hardinge products.



Hardinge, Inc.

One Hardinge Drive

P.O. Box 1507

Elmira, New York 14902 - 1507 U.S.A.

To order call: (800) 843 - 8801

Phone: (607) 734 - 2281

Fax: (607) 734 - 3886