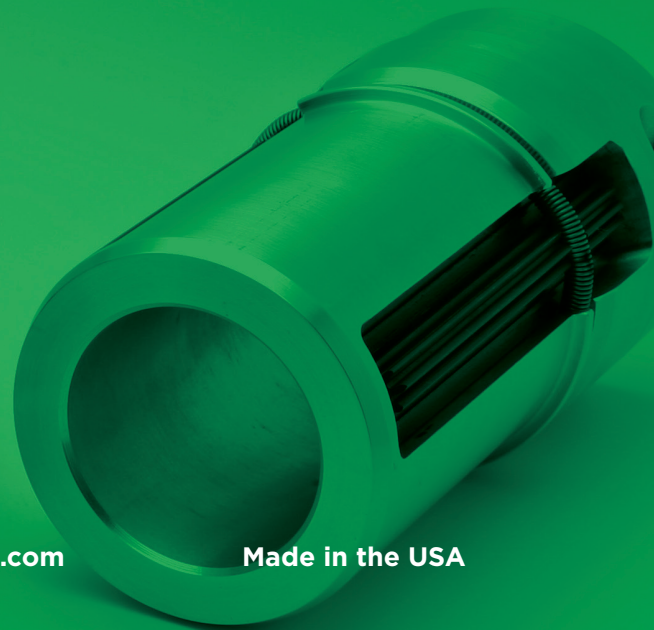
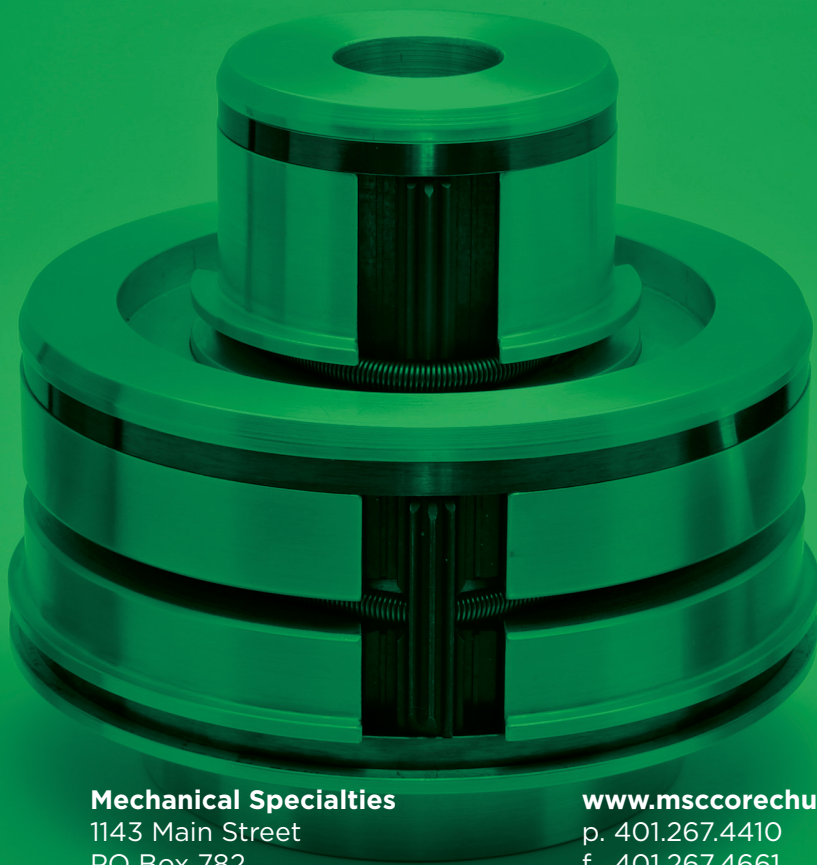




**Mechanical
Specialties**

Self Locking Mechanical Core Chucks & Mandrels

standard & custom for cardboard cores – **2020 Catalogue C-32**



Mechanical Specialties
1143 Main Street
PO Box 782
Wyoming, RI 02898

www.msccorechucks.com
p. 401.267.4410
f. 401.267.4661

Made in the USA

Testimonials

“...Overall, we find Mechanical Specialties reliable, helpful, and of great quality. They will continue to have our business for years to come.”

Shellene Moyer-Buyer
Packaging Progressions, Inc.

“...We are now able to accommodate two core sizes (3” and a 6”) easily and the core slipping issue is a thing of the past. We love your chucks!”

Chris Dunlap
Zipp Speed Weaponry

“...I definitely chose the right partner! The system is working like a charm and the project is ahead of schedule. Thanks Guys!”

Victor II Flores
Pawling Corporation

“...So it is easier on my operators and also helps us make a better product. removing your core chuck from a finished roll is also easier than any other core chuck I have.”

Christopher Smith
Blue Sky Packaging, Inc.

Standard & Specialty Products

Pg.05 Standard (Series C-CS)
This series of shoulder and shoulderless chucks is the most commonly used and is adaptable to most general applications.
• Diameters : 1” to 7” core I.D.
• Available with 1 or 3 locking rollers.
• Diameters from 1” to 3” are furnished in either steel or aluminum.
• All other sizes are in aluminum only.



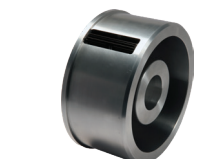
Pg.06 Long Projections (Series LP-SLP)
The shoulder and shoulderless chucks in this series provide more than double the length of core penetration by the locking element and are suitable for heavier roll applications.
• Diameters - 3” to 6” core I.D.
• Available with 3 locking rollers only.
• 3” chucks in either steel or aluminum. All other sizes are in aluminum only.



Pg.07 Captive Roller (Series CR-CRS)
The captive roller series of shoulder and shoulderless chucks feature locking roller retention. They can be used on all applications and are particularly desirable during rotational periods without a core.
The captive roller feature is adaptable to all other standard chuck series



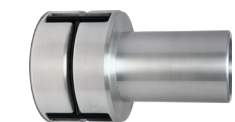
Pg.08 Large Diameter (Series LD-SLD)
A series of shoulder and shoulderless chucks for large diameter cores.
• Diameters: 8” to 20” core I.D.
• Choice of 1 or 3 locking rollers.
• Welded aluminum body.



Pg.09 Tandem (Series T)
For short run, small lot orders with core size variations. Eliminates chuck changing.
• Available in many combinations.
• All aluminum body.
• Shoulder type only, with 1 or 3 locking rollers.



Pg.10 Adapter (Series AC-ACS)
The adapter series of shoulder and shoulderless chucks are used on machines equipped with 3” Air Mandrels that on occasion are required to complete orders calling for larger cores. Its use can inexpensively overcome the necessity for larger mandrels.



Pg.10 Companion Support (Series P-PS)
A companion chuck to work in combination with standard shoulder chucks. The chuck body is plain, having no locking element. It is recommended for use where one standard chuck is operationally sufficient to supply all torque requirements.



Pg.11 Co-ordinates (Series M)
The “DO-IT-YOURSELF” System. Build a mandrel to suit your own conditions - with a combination of units.
• Diameters - 3” to 6” core I.D.
• Available with 3 locking rollers only.
• 3” chucks in either steel or aluminum. All other sizes are in aluminum only.



Pg.13 Chuck Miscellanea
Pg.14-16 Chuck Photography
Pg.17 Custom Manufacturing
Pg.18 History
Pg.19 Information

Self-locking Mechanical Core Chuck

Mechanical Specialties Core Chucks are unique in their simplicity of design and function with all of these features:

- Self-locking in either direction of rotation without the necessity for mechanical change.
- Straight faced to assure concentricity.
- Self-adjusting to the web tension pull.
- Immediate gripping - no slippage.
- Reduced set-up time.
- Steel or Aluminum.
- One or three locking rollers
- Shoulder chuck- 1/8" raised rim from the chuck body which acts as a core stop and assures positive core alignment. We use a superior alloy, copper impregnated aluminum. It is impact resistant on shoulder chucks. If the operator hammers the end of the chuck, it won't break or shatter the aluminum.
- Shoulderless chucks are made with aircraft quality aluminum. The chuck has no shoulder which permits the core to slide completely over it. When combined with the shoulder type it allows for the sliding of the core on and off without having to remove either chuck from the machine shaft.
- Chuck types are classified into "series" for easy identification and can be varied in size and shape to meet most operational requirements.
- Chuck repair parts (locking rollers, step plates, springs) can be ordered by part number from the specification sheets.

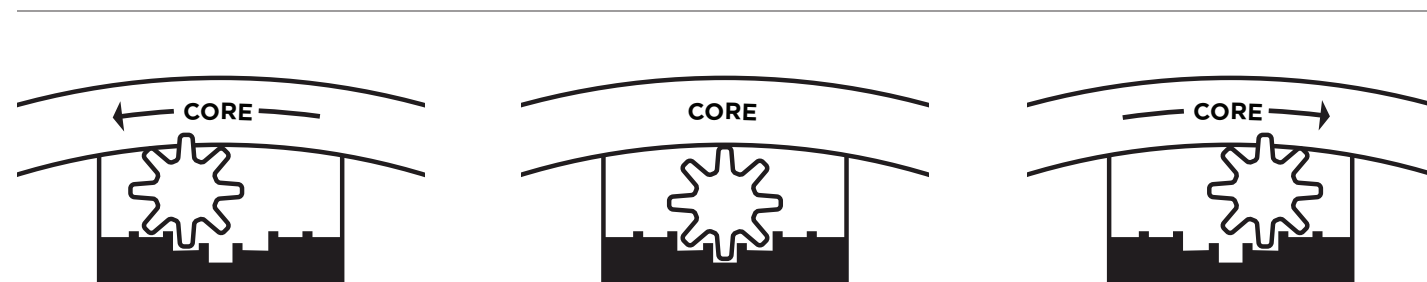
General Chuck Information:

Steel chucks and all steel components of aluminum chucks are black oxide coated for rust retardation.

Aluminum chucks are provided with steel insert step plates and furnished with a Tap-Lok insert for maximum service.

All chucks are furnished with:

- Round bore sizes with +.010 or 10 thousandths tolerance unless specified.
- +.0625 or 1/16th interference over locking rollers on O.D. of core chuck.
- Case hardened locking rollers. Rockwell hardening test - our steel parts test at 56C.
- The following at extra cost:
 - Square bores
 - Keyways (standard or special)
 - Extra set screws
 - Split hubs-clamp style
 - Flange style
 - Brass tipped set screws - For applications where the set screw markings on the shaft are the only objectional feature, we can furnish chucks with brass tipped set screws.

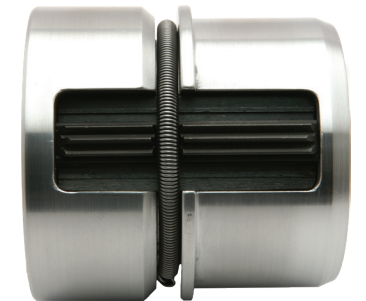
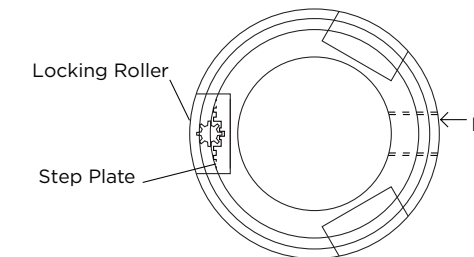
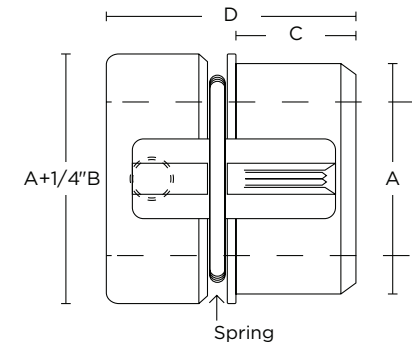


1. Position of locking roller when core is turned counter clockwise during the take-up position.
2. Position of locking roller when core is inserted or removed.
3. Position of locking roller when core is turned clockwise during the unwind position.

The above drawings illustrate the patented self-locking principles of Mechanical Specialties Chucks and Mandrels. The upward thrust of the rotatable toothed roller upon terraced steps results in positive, completely automatic locking action adjustable to the web tension pull. The ability of our chuck to lock in either direction permits the locking roller on the unwind chuck to self-adjust to the proper pull required to maintain the correct web tension when a correctional braking action is applied to the parent or unwind roll.

To watch a video demonstration of the self locking method and how it grips the cardboard core visit our website at www.msccorechucks.com.

Standard Chucks

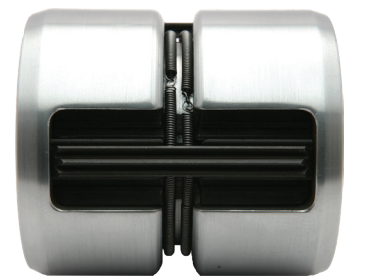
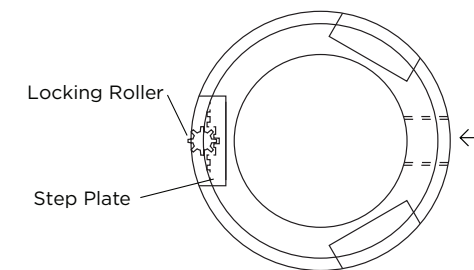
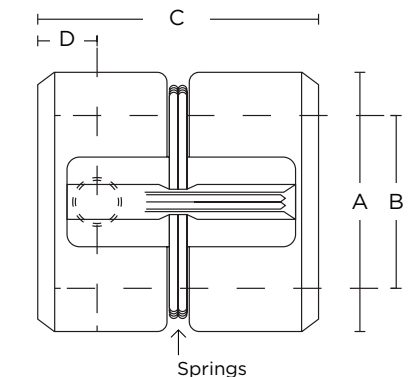


Shoulder Chuck - Series C (Single roller) / Series 3C (Three Roller)

Series Number	MAT'L	A	B	C	D	E
1-roller	3-roller	Core I.D.	Max Bore			
CS-1	3CS-1	Steel	1"	1/2	1 7/16	3
CA-1	3CA-1	Alum	1"	1/2	1 7/16	3
CS-2	3CS-2	Steel	2"	1 1/4	1 7/16	3
CA-2	3CA-2	Alum	2"	1 1/4	1 7/16	3
CS-3	3CS-3	Steel	3"	2	1 7/16	3
CA-3	3CA-3	Alum	3"	2	1 9/16	3 1/4
CA-4	3CA-4	Alum	4"	2 3/4	2	3 7/8
CA-5	3CA-5	Alum	5"	3 3/4	2	3 7/8
CA-6	3CA-6	Alum	6"	4 3/4	2	3 7/8
CA-7	3CA-7	Alum	7"	5 3/4	2	3 7/8

Spare Part Number

Locking Roller	Step Plate	Spring
R-2125	P-21-3	S-1
R-2125	P-21-3	S-1
R-2140	P-21-5	S-2
R-2140	P-21-5	S-2
R-2155	P-21-8	S-3
R-2155	P-21-8	S-3
R-2655	P-26-8	S-4
R-2655	P-26-8	S-5
R-2655	P-26-8	S-6
R-2655	P-26-8	S-7



Shoulderless Chuck - Series CS (Single Roller) / Series 3CS (Three Roller)

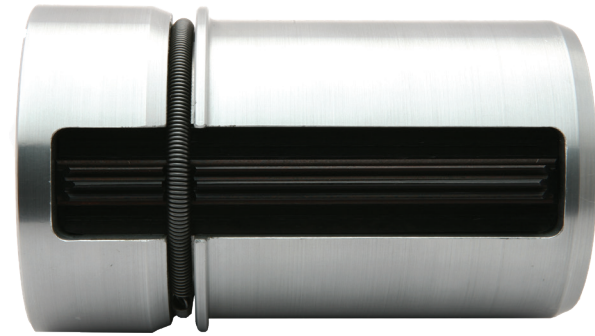
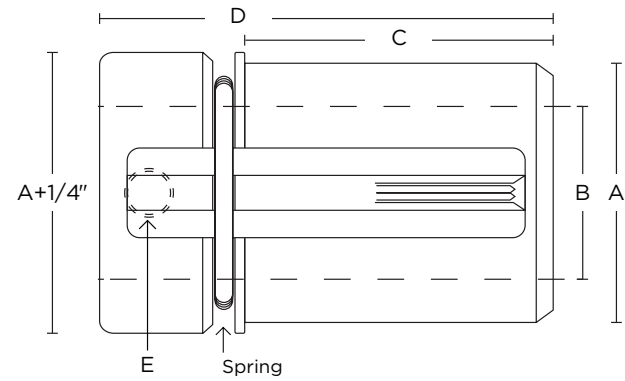
Series Number	MAT'L	A	B	C	D	E
1-roller	3-roller	Core I.D.	Max Bore			
CSS-1	3CSS-1	Steel	1"	1/2	3	5/8
CSA-1	3CSA-1	Alum	1"	1/2	3	5/8
CSS-2	3CSS-2	Steel	2"	1 1/4	3	5/8
CSA-2	3CSA-2	Alum	2"	1 1/4	3	5/8
CSS-3	3CSS-3	Steel	3"	2	3	5/8
CSA-3	3CSA-3	Alum	3"	2	3 1/4	11/16
CSA-4	3CSA-4	Alum	4"	2 3/4	3 7/8	7/8
CSA-5	3CSA-5	Alum	5"	3 3/4	3 7/8	7/8
CSA-6	3CSA-6	Alum	6"	4 3/4	3 7/8	7/8
CSA-7	3CSA-7	Alum	7"	5 3/4	3 7/8	7/8

Spare Part Number

Locking Roller	Step Plate	Spring
RS-2125	PS-21-3	SS-1
RS-2125	PS-21-3	SS-1
RS-2140	PS-21-5	SS-2
RS-2140	PS-21-5	SS-2
RS-2155	PS-21-8	SS-3
RS-2155	PS-21-8	SS-3
RS-2655	PS-26-8	SS-4
RS-2655	PS-26-8	SS-5
RS-2655	PS-26-8	SS-6
RS-2655	PS-26-8	SS-7

*Intermediate sizes available

Long Projection Chucks

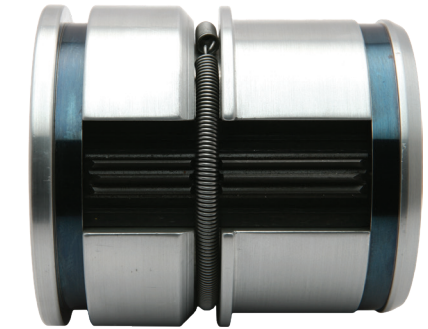
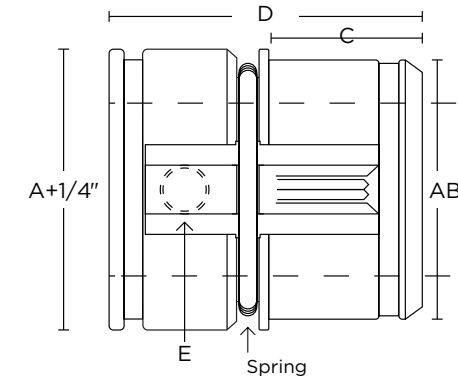


Shoulder Chuck - Series LP (Three Roller)

Series Number	MAT'L	A Core I.D.	B Max Bore	C	D	E	Locking Roller	Step Plate	Spring
LPS-3	Steel	3"	2	3 7/16	5	5/8	R-3755	P-37-8	S-3
LPA-3	Alum	3"	2	3 9/16	5 1/4	1/2	R-3755	P-37-8	S-3
LPA-4	Alum	4"	2 3/4	3 9/16	5 7/16	5/8	R-3855	P-38-8	S-4
LPA-5	Alum	5"	3 3/4	3 9/16	5 7/16	5/8	R-3855	P-38-8	S-5
LPA-6	Alum	6"	4 3/4	3 9/16	5 7/16	5/8	R-3855	P-38-8	S-6

Spare Part Number

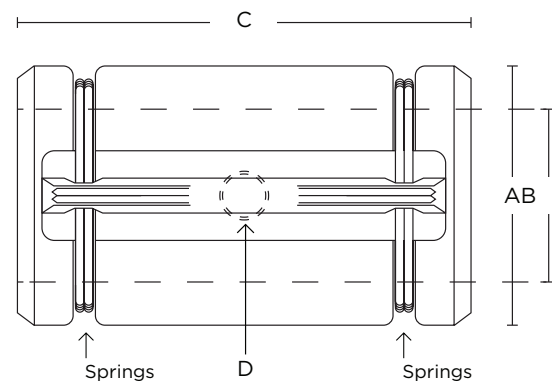
Captive Roller



Shoulder Chuck - Series CR (Single Roller) / Series 3CR (Three Roller)

Series Number	MAT'L	A Core I.D.	B Max Bore	C	D	E	Locking Roller	Step Plate	Spring	Ret. Band
CRS-3	Steel	3"	2"	1 11/16	3 1/2	5/8	XR-3	XP-3	XS-3	XB-3
CRA-3	Alum	3"	2"	1 3/4	3 5/8	1/2	XR-3	XP-3	XS-3	XB-3
CRA-4	Alum	4"	2 5/8	2 3/16	4 1/4	5/8	XR-4	XP-4	XS-4	XB-4
CRA-5	Alum	5"	3 5/8	2 3/16	4 1/4	5/8	XR-5	XP-5	XS-5	XB-5
CRA-6	Alum	6"	4 5/8	2 3/16	4 1/4	5/8	XR-6	XP-6	XS-6	XB-6

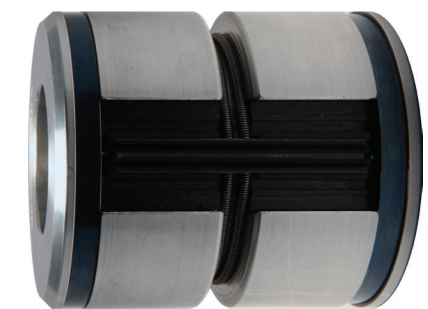
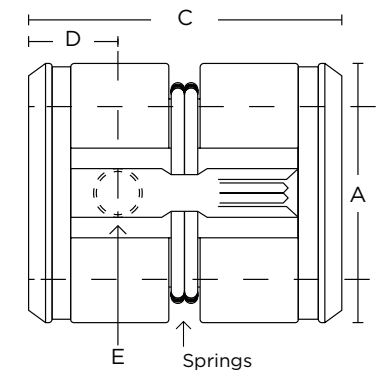
Spare Part Number



Shoulderless Chuck - Series SLP (Three Roller)

Series Number	MAT'L	A Core I.D.	B Max Bore	C	D	Locking Roller	Step Plate	Spring
SLPS-3	Steel	3"	2	5	5/8	RS-3755	PS-37-8	SS-3
SLPA-3	Alum	3"	2	5 1/4	1/2	RS-3755	PS-37-8	SS-3
SLPA-4	Alum	4"	2 3/4	5 1/4	5/8	RS-3755	PS-37-8	SS-4
SLPA-5	Alum	5"	3 3/4	5 1/4	5/8	RS-3755	PS-37-8	SS-5
SLPA-6	Alum	6"	4 3/4	5 1/4	5/8	RS-3755	PS-37-8	SS-6

Spare Part Number



Shoulderless Chuck - Series CRS (Single Roller) / Series 3CRS (Three Roller)

Series Number	MAT'L	A Core I.D.	B Max Bore	C	D	E	Locking Roller	Step Plate	Spring	Ret. Band
CRSS-3	Steel	3"	2"	3 1/2	11/16	5/8	XRS-3	XPS-3	XSS-3	XBS-3
CRSA-3	Alum	3"	2"	3 5/8	11/16	1/2	XRS-3	XPS-3	XSS-3	XBS-3
CRSA-4	Alum	4"	2 5/8	4 1/4	11/4	5/8	XRS-4	XPS-4	XSS-4	XBS-4
CRSA-5	Alum	5"	3 5/8	4 1/4	11/4	5/8	XRS-5	XPS-5	XSS-5	XBS-5
CRSA-6	Alum	6"	4 5/8	4 1/4	11/4	5/8	XRS-6	XPS-6	XSS-6	XBS-6

Spare Part Number

*Intermediate sizes available

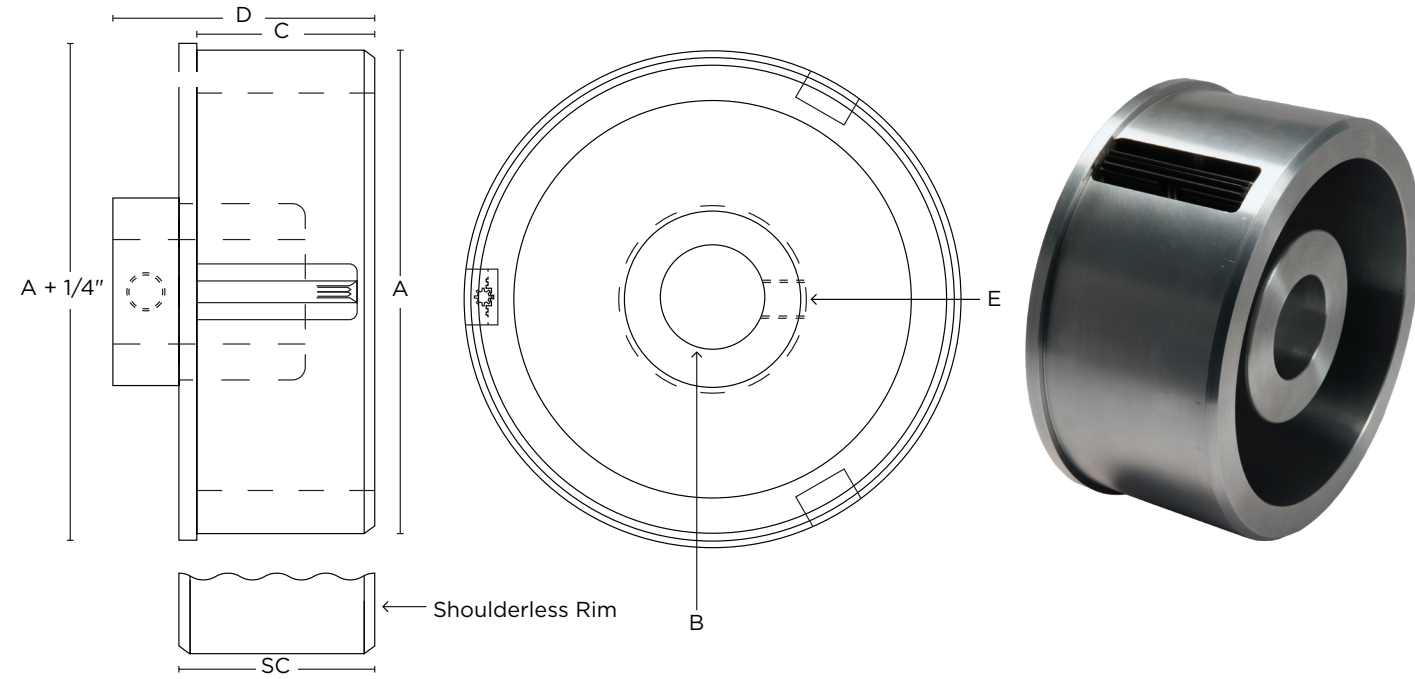
*All chucks have three locking rollers

*Intermediate sizes available

Large Diameter Chucks

Specialty Chucks

Ideal for short run or small lot orders requiring core size changes



Larger diameters of 16" through 20" can be made to customer's specifications.
All Aluminum Body-Welded

Shoulder large diameter shown

Shoulder Chuck - Series LD (Single Roller) / Series 3LD (Three Roller)

Series Number		A	B	C	D	E	Spare Part Number		
1-roller	3-roller	Core I.D.	Max Bore				Locking Roller	Step Plate	Spring
LD-8	3LD-8	8"	3	3 5/16	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
LD-9	3LD-9	9"	3	3 5/16	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
LD-10	3LD-10	10"	3	3 5/16	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
LD-12	3LD-12	12"	3	3 5/16	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
LD-14	3LD-14	14"	4	3 5/16	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
LD-16	3LD-16	16"	4	3 5/16	4 7/8	5/8	RS-2457	PS-24-8	SS-LD

*Can make chucks up to 20 inches.

Shoulderless Chuck - Series SLD (Single Roller) / Series 3 SLD (Three Roller)

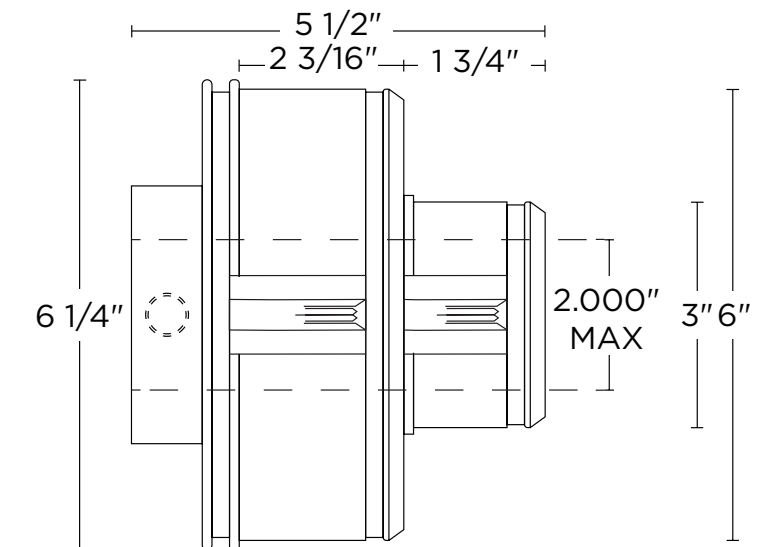
Series Number		A	B	C	D	E	Part Number		
1-roller	3-roller	Core I.D.	Max Bore				Locking Roller	Step Plate	Spring
SLD-8	3SLD-8	8"	3	3 5/8	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
SLD-9	3SLD-9	9"	3	3 5/8	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
SLD-10	3SLD-10	10"	3	3 5/8	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
SLD-12	3SLD-12	12"	3	3 5/8	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
SLD-14	3SLD-14	14"	4	3 5/8	4 7/8	5/8	RS-2457	PS-24-8	SS-LD
SLD-16	3SLD-16	16"	4	3 5/8	4 7/8	5/8	RS-2457	PS-24-8	SS-LD

*Can make chucks up to 20 inches.

Tandem Chucks - Series T

Dual chuck captive roller style. Available in different combinations.

- Standard Unit - for 3" and 6" cores
- Available in other combinations
- All Aluminum body



2" & 3" Combo

Series T		Spare Part Number			
1-roller	3-roller	Locking Roller	Step Plate	Springs	Ret. Band
T-2/3	3T-2/3	2" Chuck TXR-2140 3" Chuck TXR-2155	TXP-22.5-5 TXP-22.5-8	S-2 SS-3	TXB-2 TXB-3

3" & 6" Combo

Series T		Spare Part Number			
1-roller	3-roller	Locking Roller	Step Plate	Springs	Ret. Band
T-3/6	3T-3/6	3" Chuck TXR-2155 6" Chuck TXRS-14.557	TXP-22.5-8 TXPS-17	S-3 SS-6	TXB-3 TXB-6

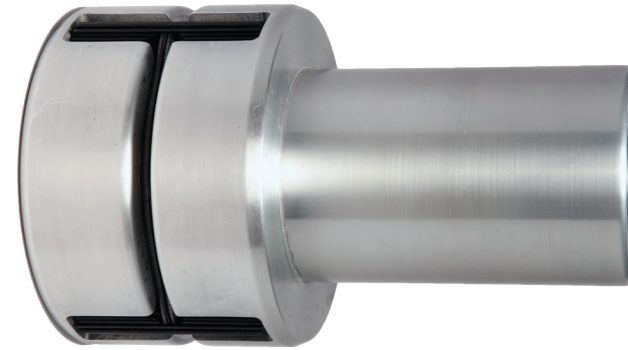
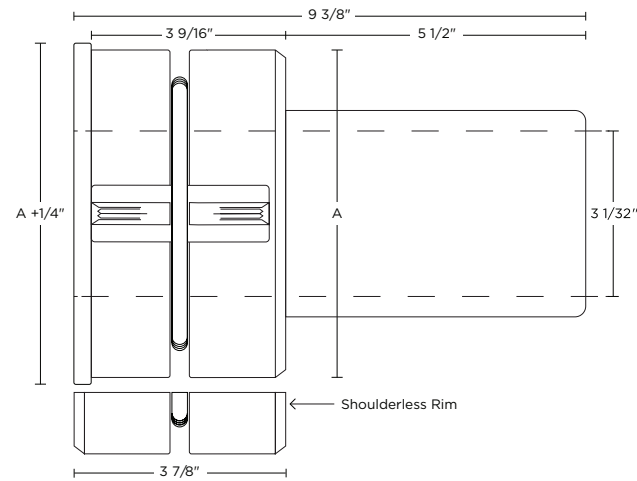
Specialty Chucks (cont.)

Chuck Co-ordinates

The "Do-It-Yourself" System

Adapter Chucks - Series AC / ACS

for 3" Air Mandrels. Overcomes the necessity for larger expensive Air Mandrels



Adapter Shoulder Chuck - Series AC (Single Roller) / Series 3AC (Three Roller)

Series Number	A
AC-6	6"
AC-8	8"
AC-10	10"
AC-12	12"

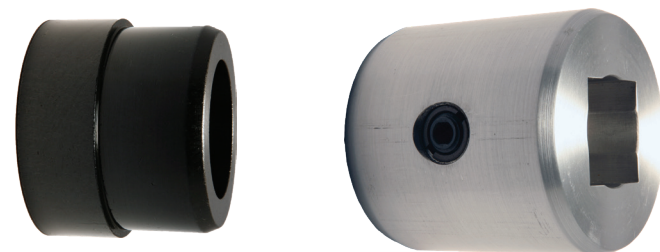
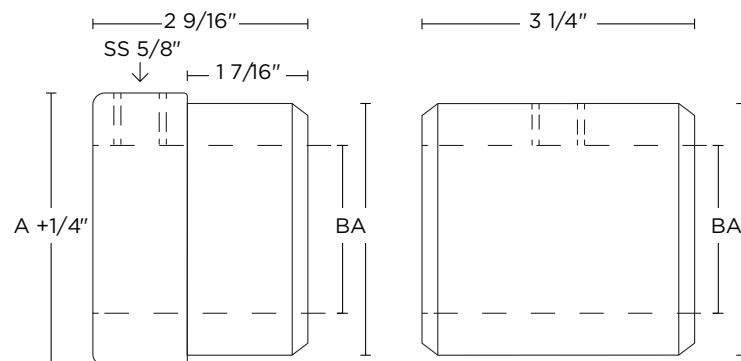
Adapter Shoulderless Chuck - Series ACS (Single Roller) / Series 3ACS (Three Roller)

Series Number	A
ACS-6	6"
ACS-8	8"
ACS-10	10"
ACS-12	12"

Spare Part Number

Locking Roller	Step Plate	Spring
RS-2655	PS-26-8	SS-6
RS-2655	PS-26-8	SS-6
RS-2655	PS-26-8	SS-6
RS-2655	PS-26-8	SS-6

Companion Support Chucks



Companion Support Chuck (Plain Body - non-locking)

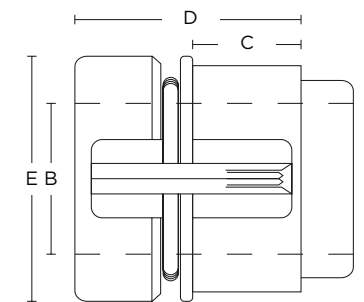
Series Number	MAT'L	A	B	
shoulder	s-less	Core I.D.	Max Bore	
PS-1	PSS-1	Steel	1"	1/2
PA-1	PSA-1	Alum	1"	1/2
PS-2	PSS-2	Steel	2"	1 1/4
PA-2	PSA-2	Alum	2"	1 1/4
PS-3	PSS-3	Steel	3"	2
PA-3	PSA-3	Alum	3"	2
PA-4	PSA-4	Alum	4"	2 1/4
PA-5	PSA-5	Alum	5"	3 3/4
PA-6	PSA-6	Alum	6"	4 3/4
PA-7	PSA-7	Alum	7"	5 3/4

Build a mandrel to suit your own conditions... with a combination of units

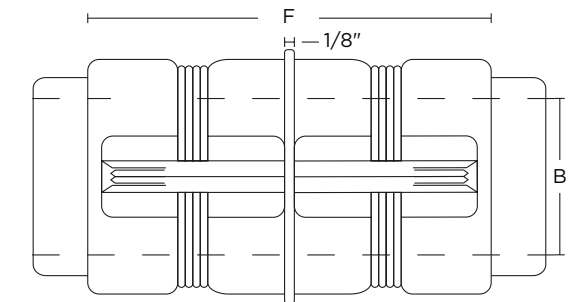
- Use your own shaft
- Establish the required length
- Select any combination of shoulder, shoulderless, chucks and spacers
- All chucks have three locking rollers and set screw

The core slides along the entire mandrel and the two chucks on either end secure the core. Mandrels give full length support to the core, preventing partial core reduction due to the elasticity of the material being wound.

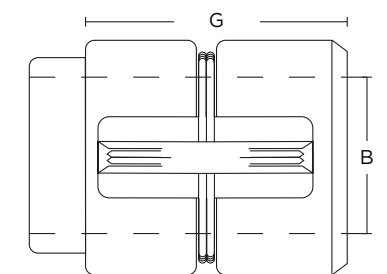
Combination Units



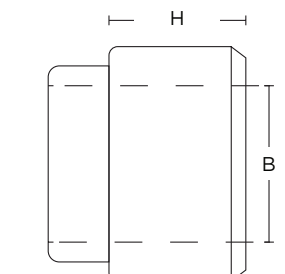
Type-S
Shoulder Chuck



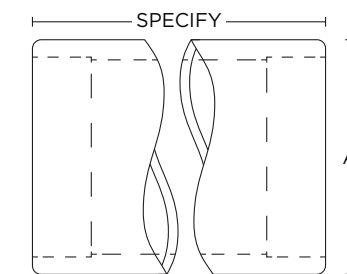
Type-SC
Shoulder Center Chuck



Type-SE
Shoulderless End Chuck



Type-BE
Blank End

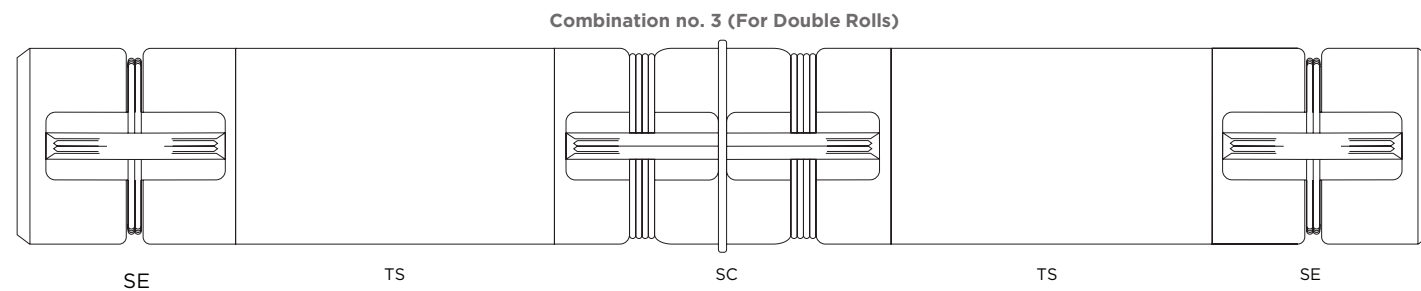
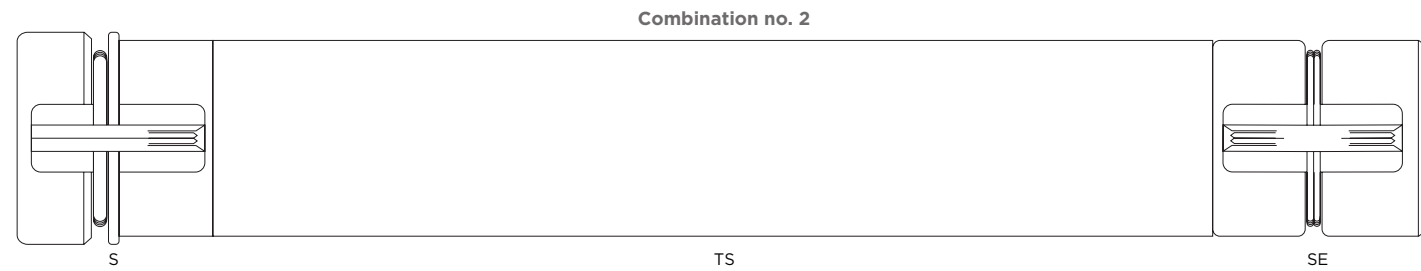
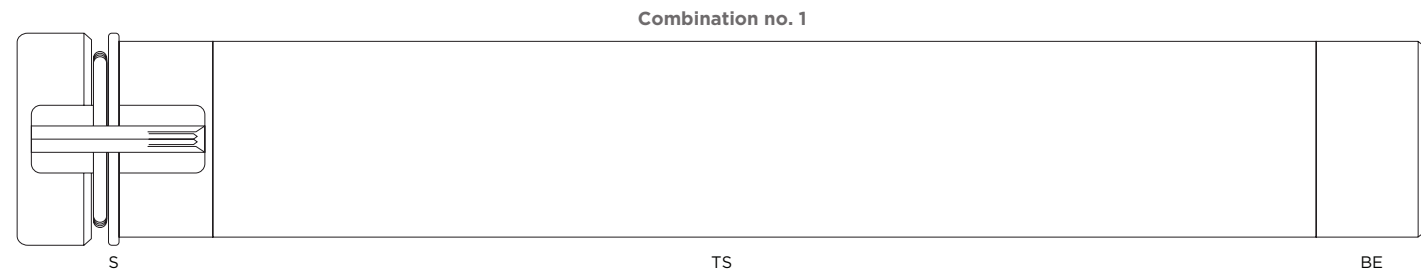


Type-TS
Tubing Spacer

Chuck Co-ordinates (cont.)

Additional Options Available

Standard Combinations



When ordering... Specify:

1. Series number
2. Combination number
3. Length of tubing spacer
4. Bore diameter

Series Number 1-roller	MAT'L	A Core I.D.	B Max Bore	C	D	E	F	G	H
MS-3	Steel	3"	2	1 7/16	3	3 1/4	5 3/4	3	13/4
MA-3	Alum	3"	2	1 7/16	3	3 1/4	5 3/4	3	13/4
MA-4	Alum	4"	2 3/4	1 7/8	3 3/4	4 1/4	7	3 3/4	13/4
MA-5	Alum	5"	3 3/4	1 7/8	3 3/4	5 1/4	7	3 3/4	13/4
MA-6	Alum	6"	4 3/4	1 7/8	3 3/4	6 1/4	7	3 3/4	13/4

Split Hubs-Clamp Style/Flange Style



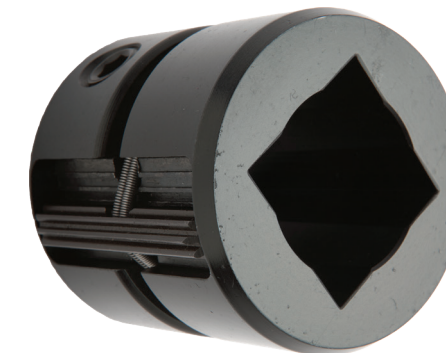
Core Chucks with split hubs are generally used on machine shafts where close tolerances are required and set screw markings and burrs are unacceptable. They are available on all shoulder type chucks. We can also produce Flange style Chucks to meet your specifications.

Spare Parts and Repair Kits



We offer an economical core chuck repair solution. You don't necessarily need to buy a new chuck. You can simply replace the locking rollers, step plates and springs. Each chuck has its own repair kit.

Square Bores



Square bores can be furnished on all types and sizes of chucks. The table on right gives the maximum square bore for chucks of the most popular sizes.

Square Bores

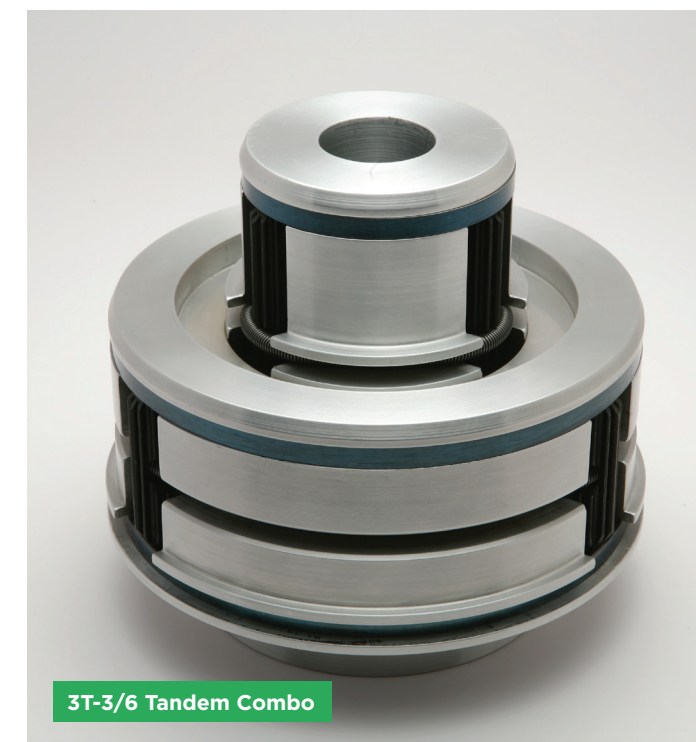
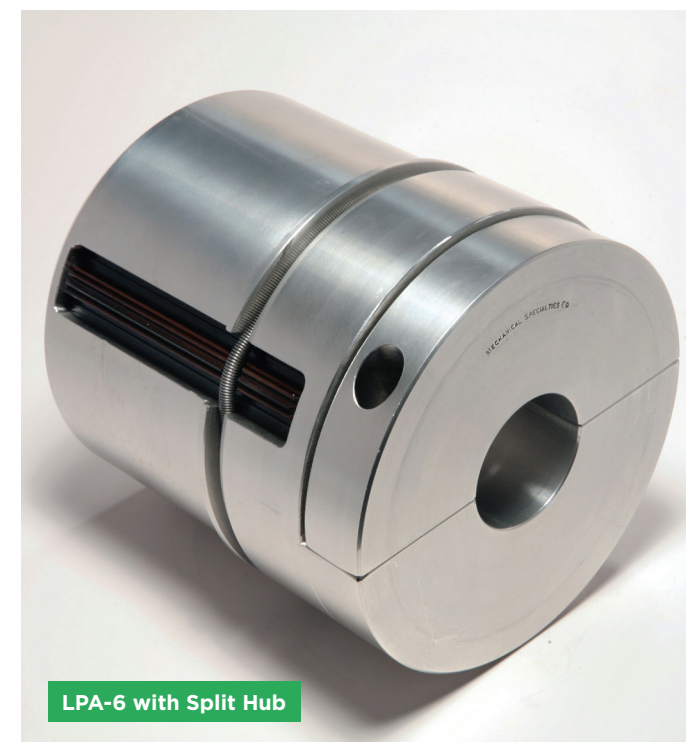
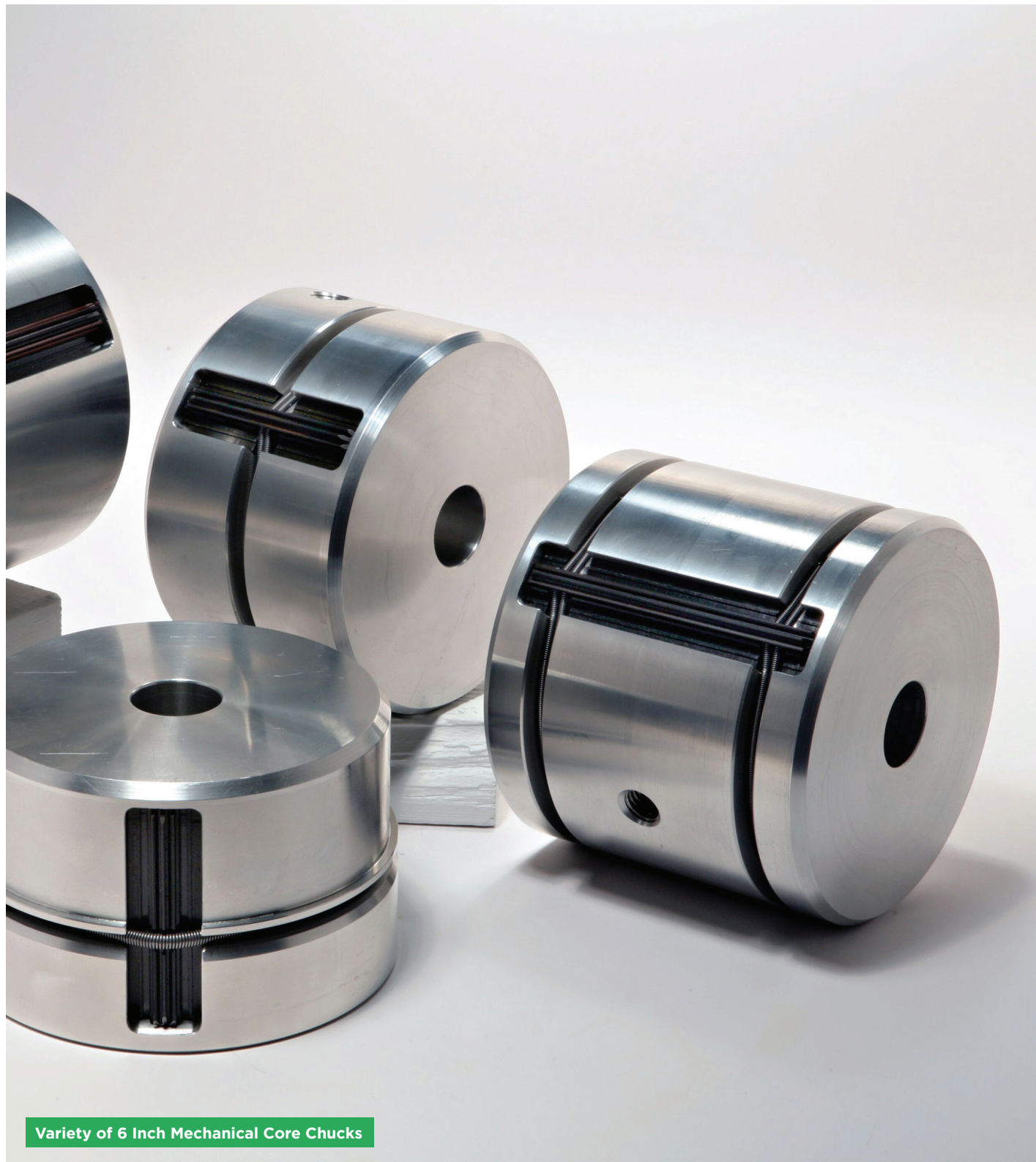
Core Size	Max Bore
2"	1"
3"	1 1/2"
4"	2 1/8"
5"	2 7/8"
6"	3 1/2"

Custom Chucks



Many customers build Mechanical Specialties Core Chucks into their equipment for automatic or semi-automatic service, in conventional or cantilever applications. An authorized outline sketch of your chuck requirements is all that is necessary for a price quotation.

Mechanical Specialties Core Chucks



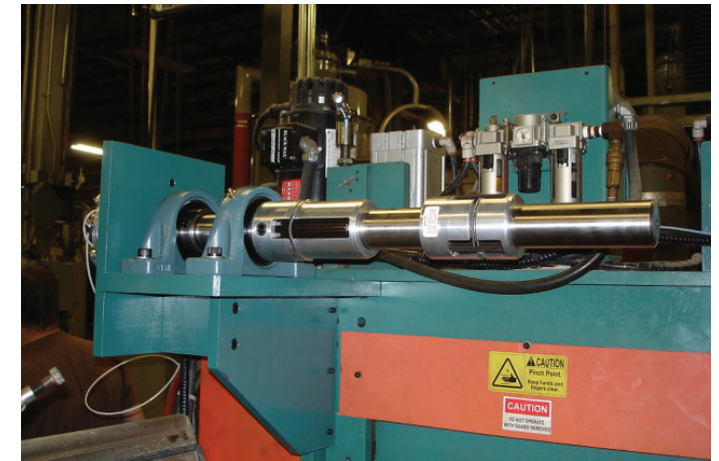
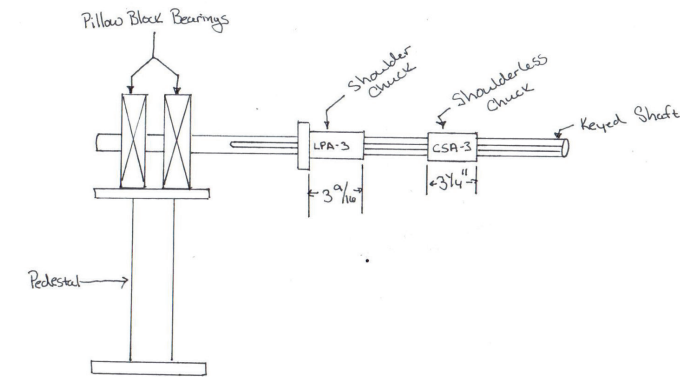
Custom Manufacturing



LPA-3 with Split Hub



3CSA-3 With Split Hub



Our design of an unwind/windup station utilizing a combination shoulder/shoulderless chuck modified with longer width.

Send us your drawing, and we'll make it.

Mechanical Specialties is a full service machine shop able to manufacture and fabricate any of your specific needs. All products from materials to production are made in the USA. Only top quality alloys are used. All we need is an authorized drawing or a sample of your existing product.



Variety of Mechanical Core Chucks



History

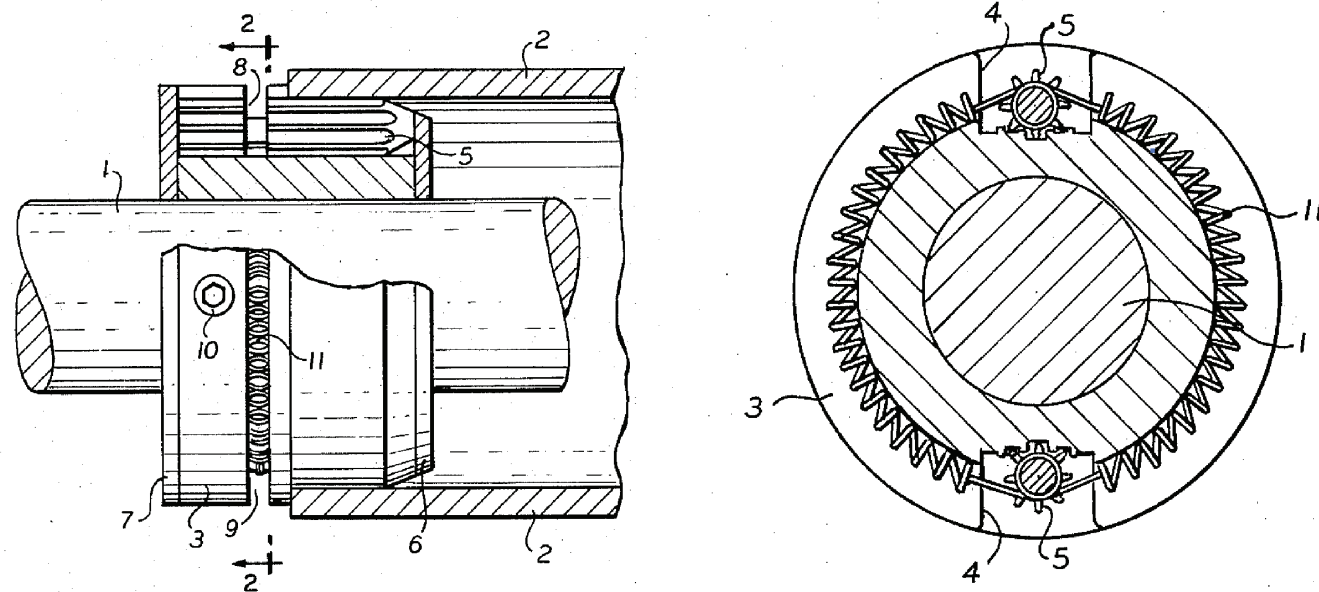
Mechanical Specialties was founded by Arthur T. Blake. Mr. Blake was the chief engineering designer for a national plastics film company and was responsible for modifying the firm's machinery and equipment used in the production of plastic film, while meeting the ever increasing standards of their customers. This experience and knowledge enabled him to obtain numerous patents and create the unique products that we continue to make today.

Mr Blake's family has continued operating the company since its beginning in 1958. We are now the third generation at the helm with a positive outlook toward the future.

The Mechanical Specialties Company produced, marketed and patented the first commercial application of a self-locking core chuck, both in the United States and abroad. This introduction of a chuck that was self-locking brought a totally new concept to the winding and unwinding of roll material. The use of self-locking chucks as a prerequisite for quality roll production has been advocated in many trade media outlets. Its use as standard equipment on machines produced by major equipment manufacturers attest to its widespread approval throughout the industry.

We are proud to be a leader in this field with a very effective, maintenance-free product.

Mechanical Specialties, under new management, relocated their operations from New Jersey to Rhode Island in 2015. As a family run business, we strive to provide personal service and attention, including immediate responses to your questions or concerns. All of our products are manufactured from the highest quality materials and made to last. In addition, the custom manufacturing side of our business is available to manufacture other products that you may require. All that is required is an authorized drawing.



Information

The chuck dimensions furnished on the preceding specification sheets are presented for the purpose of enabling the user to make proper installation. When ordering, the customer's selection should be based solely on the functioning, the correct Series Number, and the suitability of the chuck for the purpose intended.

Additional Warranty / Disclaimer Information

The right is reserved to make price, design, and specification changes without notice and with no obligation to provide similar changes on previously furnished Mechanical Specialties products. Our products are carefully inspected at our plant before shipment and are guaranteed against defective materials and workmanship, but only to the extent of repair or replacement, and includes no recompense for any costs, losses or damages arising because of such defective part. No other guarantees shall be implied and Mechanical Specialties assumes no liability beyond that expressed above.

In accordance with the guarantee, Mechanical Specialties will replace or repair any unit within one year from date of delivery. Chuck parts such as locking rollers, step plates and springs that are subject to normal operational wear are not included.

WARNING

To prevent injury to operator, the machine should not be operated or turned on if core chucks are not inserted in the cardboard cores. This does not apply when using the captive roller chucks (Series CR-CRS).

