



- Bar Pulling
- Workholding
- Air Collet Closers
- Collet Chucking
- Spindle Assemblies



Manufacturing Precision
Workholding Solutions Since 1958

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E-X-P-A-N-D-I-N-G MANDRELS

DUNHAM TOOL manufactures a wide range of manual Expanding Mandrels ("Miser Mandrels") which provides an expanding member to locate and chuck work from the **INSIDE DIAMETER** for light secondary operations using your present machine tools. DUNHAM Expanding Mandrels are machinable by the customer to meet custom configurations for each application.

HOW IT WORKS

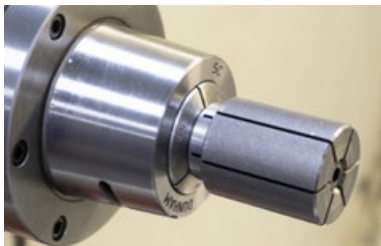
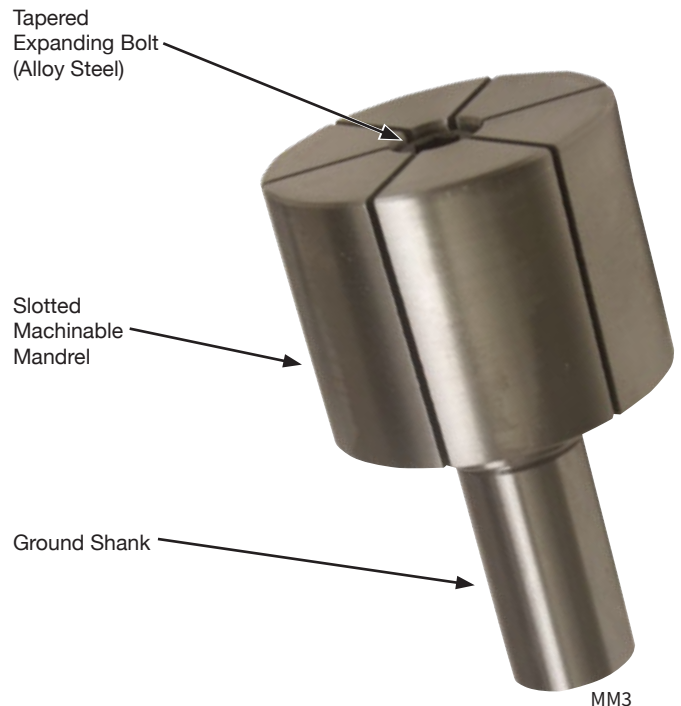
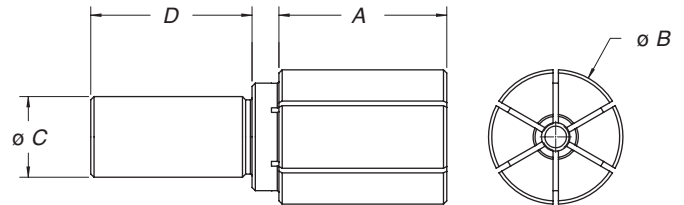
1. Clamp the DUNHAM EXPANDING MANDREL'S ground shank into your workholding device.
2. Position the parts ID over the mandrel, and activate the expansion by tightening of the hex draw bolt. Part is now chucked and ready for machining.

**Expanding Mandrel should be machined by the customer to the desired diameter and specs before initial use*

** Recommended expansions not to exceed .006" when close concentricity is desired. Expansion of .010" to .015" can be obtained, but concentricity may be impaired..*

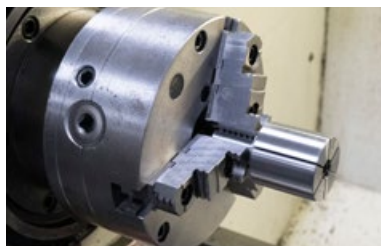
FEATURES & BENEFITS

- Requires NO Special Adapters.
- Used with Collets, Jaw Chucks, Vises, Tombstones, or Special Fixtures.
- Actuated Manually Via the Hex Head Draw Bolt.
- No Draw Back Gives a Positive Location.



Expanding Mandrel in small secondary lathe collet chuck.

Expanding Mandrel used in Jaw Chuck



Expanding Mandrel internally chucking for milling operation.

EXPANDING MANDRELS

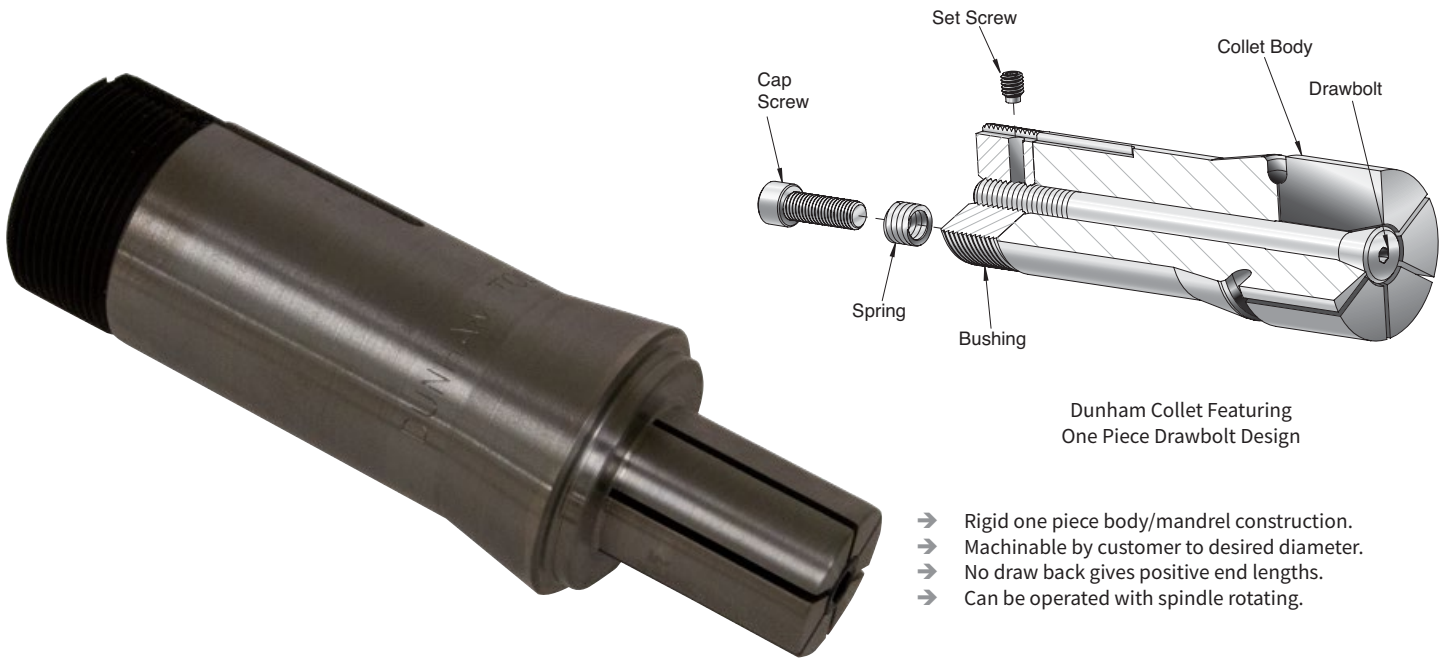
Part #	Machinable Diameter Range	"A" Mandrel Length	"B" Mandrel Diameter	"C" Shank Diameter	"D" Shank Length
MM0	.312" - .500"	1.13"	.50"	.375"	1.000"
MMX	.375" - .625"	1.13"	.625"	.375"	1.000"
MM1	.500" - 1.250"	1"	1.25"	.750"	1.500"
MM2	.500" - 1.250"	1.50"	1.25"	.750"	1.500"
MM3	.750" - 2.000"	1.50"	2.00"	.750"	1.500"
MM4	.750" - 3.750"	2"	3.75"	1.000"	1.500"
MM5	.750" - 5.000"	2"	5.00"	1.000"	1.500"
MM6	.750" - 6.000"	2"	6.00"	1.000"	1.500"

Visit www.DunhamTool.com for custom Mandrel options!



E-X-P-A-N-D-I-N-G COLLETS

• INTERNAL COLLET CHUCKING • ACCURATE • ECONOMICAL •



WHAT DOES IT DO?

DUNHAM EXPANDING COLLETS provide an expanding member to locate and hold work from the INSIDE DIMENSION of a part, using your present 5C, 16C, or 3J equipment – lathes, milling machines, grinders, fixtures, etc.—NO extra attachments!

HOW WELL WILL IT PERFORM?

Accuracy within .0005" is not unusual on concentricity and the expanding collet enables you to hold close shoulder tolerances.

HOW IT WORKS

1. Insert the DUNHAM EXPANDING COLLET in the spindle of your machine.
2. Make up the draw bar until the collet taper seats. The conventional movement of the draw bar will expand and release the soft slotted member.
3. Place the ID of the part over the mandrel, and activate your closer to expand the collet and begin machining.

**Expanding Collet should be machined by the customer to the desired diameter and specs before initial use.*

** Recommended expansions not to exceed .006" when close concentricity is desired. Expansion of .010" to .015" can be obtained, but concentricity may be impaired.*

FEATURES & BENEFITS

- The soft mandrel is easily machinable to fit any I.D. within the range of the collet, i.e. from 1/4" to 6".
- The solid taper on the collet, once seated, will not draw back into the spindle. Thus, a machined shoulder will hold the width dimensions within .001".
- The DUNHAM EXPANDING COLLET may be removed and replaced in the machine without affecting its accuracy as in any standard collet. If accuracy to within .0005" is desired, a slight truing cut will suffice.
- Can be re-machined multiple times to fit different applications.
- Dunham collets can be transferred to any machine using standard collets. Therefore, it may be switched from machine to machine for use in grinding, machining, drilling, milling, etc., saving valuable time.



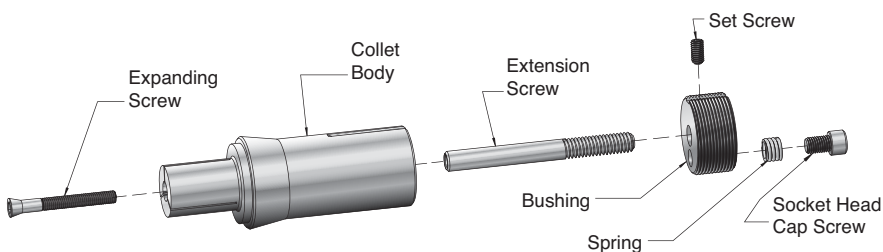
E-X-P-A-N-D-I-N-G COLLETS

E-X-P-A-N-D-I-N-G COLLETS 5C—3J—16C

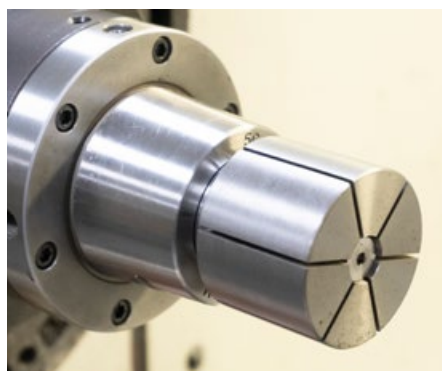
5C EXPANDING COLLET

Part Number	Mandrel Rough Diameter	Machinable Diameter Range	Head Length
CC410	1/2"	.250" - .468"	1"
CC710	13/16"	.437" - .800"	1"
CC1510	1 1/2"	.750" - 1.437"	1"
CC1515	1 1/2"	.750" - 1.437"	1 1/2"
CC1520	1 1/2"	.750" - 1.437"	2"
CC1525	1 1/2"	.750" - 1.437"	2 1/2"
CC1530	1 1/2"	.750" - 1.437"	3"
CC2010	2"	.750" - 1.937"	1"
CC2015	2"	.750" - 1.937"	1 1/2"
CC2020	2"	.750" - 1.937"	2"
CC2025	2"	.750" - 1.937"	2 1/2"
CC2030	2"	.750" - 1.937"	3"
CC2510	2 1/2"	.750" - 2.437"	1"
CC2515	2 1/2"	.750" - 2.437"	1 1/2"
CC2520	2 1/2"	.750" - 2.437"	2"
CC2525	2 1/2"	.750" - 2.437"	2 1/2"
CC2530	2 1/2"	.750" - 2.437"	3"
CC3010	3"	.750" - 2.937"	1"
CC3015	3"	.750" - 2.937"	1 1/2"
CC3020	3"	.750" - 2.937"	2"
CC3025	3"	.750" - 2.937"	2 1/2"
CC3030	3"	.750" - 2.937"	3"
CC3710	3 3/4"	.750" - 3.687"	1"
CC3715	3 3/4"	.750" - 3.687"	1 1/2"
CC3720	3 3/4"	.750" - 3.687"	2"
CC3725	3 3/4"	.750" - 3.687"	2 1/2"
CC3730	3 3/4"	.750" - 3.687"	3"
CC5020	5"	.750" - 4.937"	2"
CC6020	6"	.750" - 5.937"	2"

*Above items available from stock. For additional sizes & specialty collets visit www.DunhamTool.com



CC410 & CC710
Utilizing Two Piece Draw Bolt Design



DUNHAM 5C EXPANDING COLLET
Shown mounted for use in a Dunham Collet Chuck



DUNHAM 5C EXPANDING COLLET
Shown with threaded part mounting feature
machined into collet by customer.

16C EXPANDING COLLET

Part Number	Mandrel Rough Diameter	Machinable Diameter Range	Head Length
16C1510	1 1/2"	.750" - 1.437"	1"
16C1520	1 1/2"	.750" - 1.437"	2"
16C1530	1 1/2"	.750" - 1.437"	3"
16C2010	2"	.750" - 1.937"	1"
16C2020	2"	.750" - 1.937"	2"
16C2030	2"	.750" - 1.937"	3"
16C3010	3"	.750" - 2.937"	1"
16C3020	3"	.750" - 2.937"	2"
16C3030	3"	.750" - 2.937"	3"

*Above items available from stock. For additional sizes & specialty collets visit www.DunhamTool.com

3J EXPANDING COLLET

Part Number	Mandrel Rough Diameter	Machinable Diameter Range	Head Length
CC3J1510	1 1/2"	.750" - 1.437"	1"
CC3J1520	1 1/2"	.750" - 1.437"	2"
CC3J1530	1 1/2"	.750" - 1.437"	3"
CC3J2010	2"	.750" - 1.937"	1"
CC3J2020	2"	.750" - 1.937"	2"
CC3J2030	2"	.750" - 1.937"	3"
CC3J3010	3"	.750" - 2.937"	1"
CC3J3020	3"	.750" - 2.937"	2"
CC3J3030	3"	.750" - 2.937"	3"

*Above items available from stock. For additional sizes & specialty collets visit www.DunhamTool.com

5C COLLET



3J COLLET



16C COLLET



BAR PULLERS^{AND} BAR PULL KITS

DUNHAM TOOL manufacturers high quality lathe bar pullers and bar puller kits to enhance your bar stock pulling application needs. Employing a DUNHAM Bar Pull shank (available in 9 diameters) which is clamped in the lathe turret in the same manner as a boring bar, the grippers are hand turned onto the shank thread or onto adapters that attach to the shank to accept smaller diameter grippers. These self-activating grippers are slotted like standard collets, and as they advance over the bar to be pulled, are forced open to firmly grasp the bar for pulling out of the spindle to a programed length. Gripping and release of the bar are automatic when the turret is advanced and retracted.

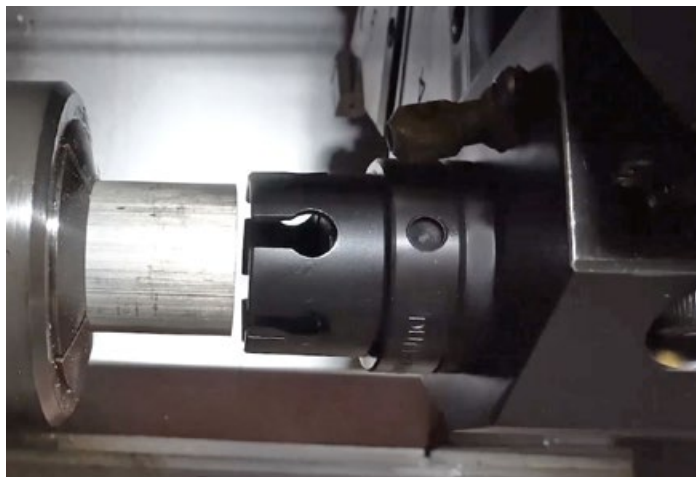
Utilizing NO moving parts, DUNHAM Bar Pullers are economical, lightweight, and can be mounted in 60 seconds, with gripper changes in 30 seconds or less. When a DUNHAM Bar Puller is used, the lathe turret no longer acts as a stock stop, reducing turret degradation and eliminating expensive, space-consuming, high-maintenance bar feeds.

HOW IT WORKS

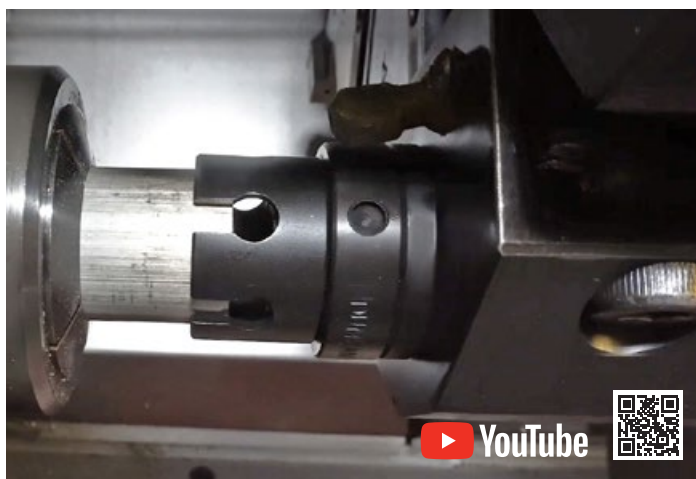
1. Mount shank in turret and screw on adapter (if required) and gripper.
2. Insert bar through the back of the spindle and clamp with collet or chuck.
3. Face off a minimum ¼" projection using the parting-off command in CNC program.
4. Index turret to Bar-Pull and traverse turret toward spindle for programmed distance, sliding gripper over stock.
5. Release clamping pressure on bar.
6. Retract turret programmed distance.
7. Re-clamp bar.
8. Retract turret sufficiently to clear gripper from bar.
9. Begin programmed machining cycle, continuing until all of bar is used.

FEATURES & BENEFITS

- Requires NO Special Adapters
- Pull-Positions Bar +/- 0.001"
- Eliminates Expensive Bar Feeds
- Does NOT Interfere With Adjacent Tools or Turret Movement
- Pulls Bar to Last Usable Part Length
- Works Close to Chuck or Collet Nose



Machine turret shown traversing towards clamped bar with faced-off length projecting.



Bar Puller now with minimum ¼" engagement onto the bar. As clamping pressure is released turret retracts, pulling bar to programed length.



DUNHAM Tool's 22 PC "BARPULLKIT-6" featuring the most common grippers and two bar pull adapters. Shanks sold separately.

BAR PULLERS^{AND} BAR PULL KITS

BAR PULL KITS

Part #	Description of Kits
BARPULLKIT-1	11 Grippers (1/4" to 1-1/2 in 1/8" increments) PLUS 5/8" and 1" adapters.
BARPULLKIT-2	4 Grippers (1-5/8" to 2" in 1/8" increments)
BARPULLKIT-3	6 Grippers (3/16" to 1/2" in 1/16" increments) PLUS 5/8" adapter.
BARPULLKIT-4	8 Grippers (9/16" to 1" in 1/16" increments) PLUS 5/8" and 1" adapters.
BARPULLKIT-5	4 Grippers (1-1/8" to 1-1/2 in 1/8" increments) PLUS 1" adapter.
BARPULLKIT-6	22 Grippers: 14 Grippers (3/16" to 1" in 1/16" increments) & 8 Grippers (1 1/8" to 2" in 1/8" increments) PLUS 5/8" and 1" adapters.
BARPULLKIT-7	SPECIAL KIT FOR GANG TOOL CNC Lathes: 10 Grippers (3/16" to 3/4" in 1/16" increments); PLUS PB0625GT Shank.

BAR PULL SHANKS

Part #	Shank Size
PB0500	1/2"
PB0625	5/8"
PB0750	3/4"
PB0875	7/8"
PB1000	1"
PB1250	1-1/4"
PB1500	1-1/2"
PB25MM	25MM
PB0625GT	For gang tool lathes only

BAR PULL ADAPTERS

Part #	Adapter Sizes
APB0625	5/8"
APB1000	1"
APB1000GT	5/8" Gang Tool



Check out our special **GANG TOOL Kit for CNC Lathes!** Requiring no adapters, this kit uses a special Bar Pull Shank in which grippers mount directly to the shank--making it possible to utilize DUNHAM Grippers on typically tight spaced Gang Tool Lathe applications.



BAR PULL GRIPPERS (INCH)

Part Number	Gripper Size (Inch)	Required Adapter	Part Number	Gripper Size (Inch)	Required Adapter	Part Number	Gripper Size (Inch)	Required Adapter	Part Number	Gripper Size (Inch)	Required Adapter
PBG0125	1/8"	APB0625	PBG0750	3/4"	APB0625	PBG1375	1-3/8"	NONE	PBG2000	2"	NONE
PBG0187	3/16"	APB0625	PBG0812	13/16"	APB1000	PBG1437	1-7/16"	NONE	PBG2125	2-1/8"	NONE
PBG0250	1/4"	APB0625	PBG0875	7/8"	APB1000	PBG1500	1-1/2"	NONE	PBG2250	2-1/4"	NONE
PBG0312	5/16"	APB0625	PBG0937	15/16"	APB1000	PBG1562	1-9/16"	NONE	PBG2375	2-3/8"	NONE
PBG0375	3/8"	APB0625	PBG1000	1"	APB1000	PBG1625	1-5/8"	NONE	PBG2500	2-1/2"	NONE
PBG0437	7/16"	APB0625	PBG1062	1-1/16"	APB1000	PBG1687	1-11/16"	NONE	PBG2625	2-5/8"	NONE
PBG0500	1/2"	APB0625	PBG1125	1-1/8"	APB1000	PBG1750	1-3/4"	NONE	PBG2750	2-3/4"	NONE
PBG0562	9/16"	APB0625	PBG1187	1-3/16"	APB1000	PBG1812	1-13/16"	NONE	PBG3000	3"	NONE
PBG0625	5/8"	APB0625	PBG1250	1-1/4"	APB1000	PBG1875	1-7/8"	NONE			
PBG0687	11/16"	APB0625	PBG1312	1-5/16"	APB1000	PBG1937	1-15/16"	NONE			

BAR PULL GRIPPERS (METRIC)

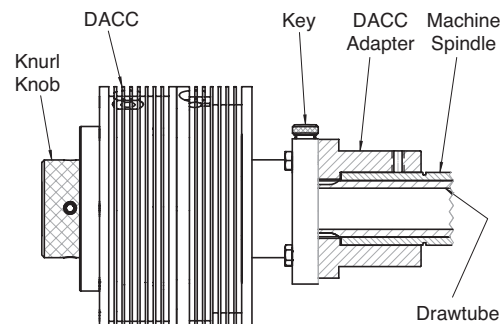
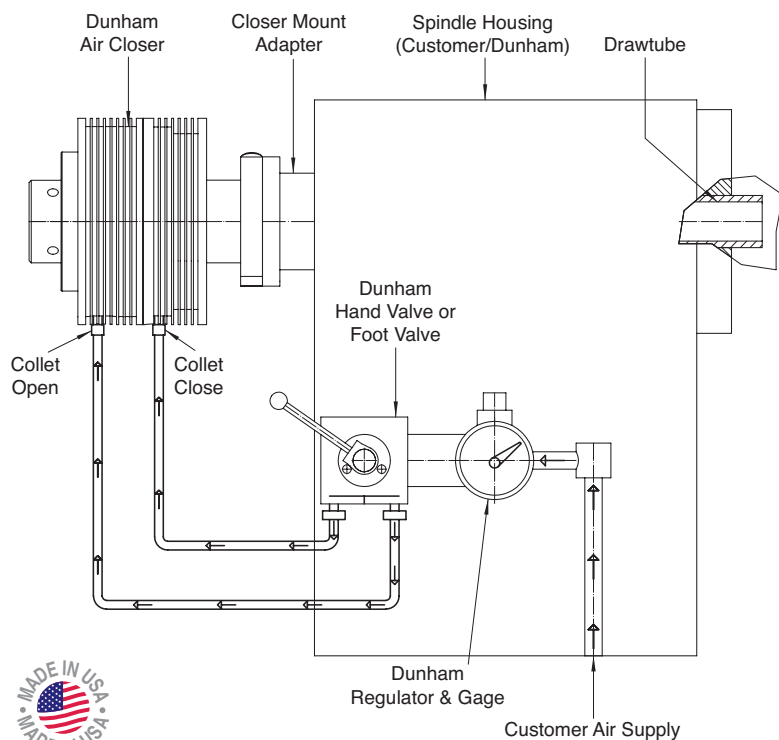
Part Number	Gripper Size (MM)	Required Adapter	Part Number	Gripper Size (MM)	Required Adapter	Part Number	Gripper Size (MM)	Required Adapter	Part Number	Gripper Size (MM)	Required Adapter
PBG03MM	3	APB0625	PBG11MM	11	APB0625	PBG19MM	19	APB0625	PBG27MM	27	APB1000
PBG04MM	4	APB0625	PBG12MM	12	APB0625	PBG20MM	20	APB0625	PBG28MM	28	APB1000
PBG05MM	5	APB0625	PBG13MM	13	APB0625	PBG21MM	21	APB1000	PBG29MM	29	APB1000
PBG06MM	6	APB0625	PBG14MM	14	APB0625	PBG22MM	22	APB1000	PBG30MM	30	APB1000
PBG07MM	7	APB0625	PBG15MM	15	APB0625	PBG23MM	23	APB1000	PBG31MM	31	APB1000
PBG08MM	8	APB0625	PBG16MM	16	APB0625	PBG24MM	24	APB1000	PBG32MM	32	APB1000
PBG09MM	9	APB0625	PBG17MM	17	APB0625	PBG25MM	25	APB1000	PBG33MM	33	NONE
PBG10MM	10	APB0625	PBG18MM	18	APB0625	PBG26MM	26	APB1000	PBG34MM	34	NONE

AIR COLLET CLOSERS

FAST ACTUATING—INCREASES PRODUCTION



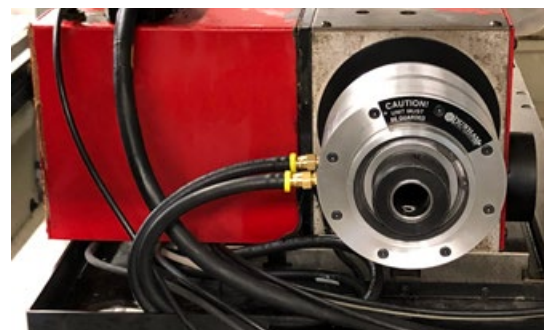
The complete range of **DUNHAM Air Collet Closers (DACC)** are designed to increase production and reduce operator fatigue on lathes, grinders, and CNC Rotary Tables. Standard units employ a double acting non-rotating air cylinder that mounts on the outboard end of the lathe spindle to activate collets and power chucks. Even gripping pressure compensates for stock diameter variations which a mechanical lathe closer can not accommodate.



Lathes

FEATURES & BENEFITS

- Increases Production & Reduces Operator Fatigue
- Easily Adaptable—Mounts in Just Minutes
- Through Hole Capacity: 1-1/16" (5C) To 1-3/4" (3J)
- Models Available From 3,500 To 6,000 RPM Intermittent
- Double Acting Air Cylinder—No Collet Sticking!
- Non-Rotating Air Cylinder
- Models For Use With 2J, 3J, 5C, & 16C Collets and Step Chucks



Rotary Tables

AIR COLLET CLOSERS—DRAW TUBES—ACCESSORIES

MODEL	DESCRIPTION/SPECS
DACC	Our MOST POPULAR 5C Air Cooled Closer! Easily adapts to many applications such as lathes, grinders, and indexers providing increased production and efficiency.
DACCOM	The “Oil Mist Cooled” closer features a continuous supply of lubrication to maintain operating temperatures making it ideal for use in higher RPM applications. Also features an upgraded “Hard Coat” finish for added wear resistance.
DACC27	Dunham’s MOST POWERFUL Closer! Featuring the highest Pull & Push Force Rating of any Dunham Closer it is ideal for applications requiring high feed rates or large depths of cut. This unit also allows for thru-capacity work.
DACCDP	This “Double Piston” design, offers the highest Pull Power rating in the Dunham line-up. At just 6” in diameter, it is ideal for jobs requiring higher pull loads and also includes a hard coat finish, protecting high wear surfaces. Not intended for thru-capacity work.
DACCOM16C	“Oil Mist” Closer designed for use with 16C Collet applications. The Oil Mist lubrication system provides a continuous supply of lubrication helping to maintain temperatures. Allowing for thru-capacity work, it also includes a complete 16C Lube Kit.
DACCOM3J	“Oil Mist” Closer designed for use with 3J Collet applications. The Oil Mist lubrication system provides a continuous supply of lubrication helping to maintain temperatures. Allowing for thru-capacity work, it also includes a complete 3J Lube Kit.

*Basic Models listed above. For more unique and custom models visit www.DunhamTool.com.

DACC



DACC

DACCOM



DACCOM—16C & 3J

DACCOM16C



DUNHAM AIR COLLET CLOSER MODELS

Specification	Standard DACC	Oil Mist DACCOM	DACC27	DACCDP	Oil Mist DACCOM16C	Oil Mist DACCOM3J
Collet Type	5C	5C	5C	5C	16C	3J
Body Diameter	6"	6"	8-1/2"	6"	8"	8"
Draw Tube O.D * (Front/Rear)	1 -3/8"	1 -3/8"	1 -3/8"	1 -3/8"	16C (2.078"/2.115")	3J: 2.115"
Pull Force @ 100 PSI	1,650	1,990	2,700	3,526	3,040	3,040
Push Force @ 100 PSI	600	1,000	3,100	*294 lbs. @ 3/16" stroke	1,200	1,200
Stroke-Standard (Optional)	5/16"	5/16"	3/4"	5/16"	5/16"	5/16"
Max. Spindle Speed (RPM)	3,600	6,000	3,600	5,000	4,500	4,500
Weight	13.60 lb.	14.40 lb.	19.50 lb.	10.40 lb.	32.30 lb.	32.30 lb.

Complete your closer conversion by adding a Draw Tube and Spindle Mounting Adapter. Order a Cut-To-Fit Draw Tube and adapter blank to save money and finish yourself, or let us custom make both items to fit your specific machine needs.



DT-18-7k

CUT-TO FIT DRAW TUBES

Part #	Length
DT-18-7K	18"
DT-24-7K	24"
DT-30-7K	30"
DT-36-7K	36"
DT-42-7K	42"

MB244-G



DACC-4FV-KIT



DACC-4HV-KIT

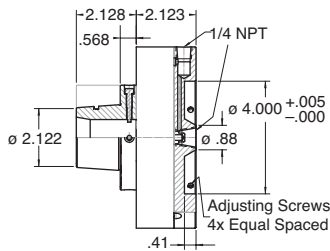


CLOSER ACCESSORIES

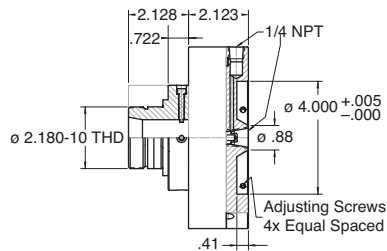
Part #	Description
MB244-G	Blank “Machinable” Spindle Mounting Adapter for 5C Closers.
DACC-4HV-KIT	Hand Valve Control Kit-- Complete with hand valve, hoses and fittings and air regulator.
DACC-4FV-KIT	Foot Pedal Control Kit-- Includes Foot Pedal, hoses and fittings, and air regulator.

AIR COLLET CHUCK

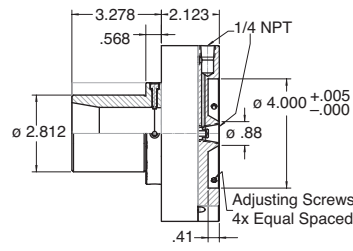
5C 4° TAPER



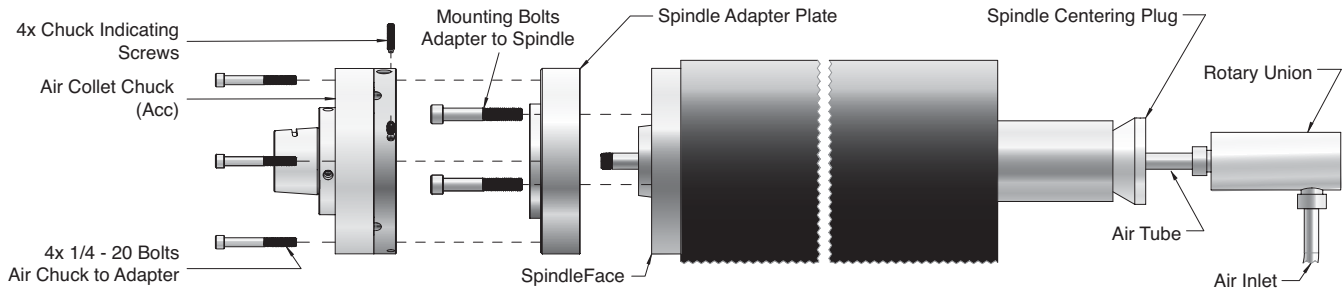
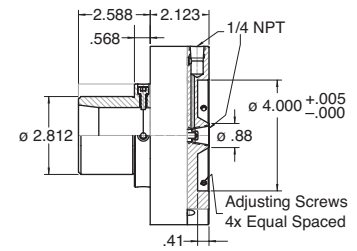
5C THREADED



16C



3J



Dunham Air Collet Chucks are designed for secondary chucking—not for thru work. Our chucks accept all standard 5C Collets (1/16" to 1-1/16" diameters), expanding 5C Collets, and 5C Step Chucks (1/4" to 6" diameters). Standard models are also available for 3C, 2J, 16C, 3J and 22J collet sizes.

These highly accurate and efficient Air Collet Chucks hold and activate the various collet sizes described above. They are commonly used for both rotary and stationary applications on lathes, grinders (surface and cylindrical), machining centers, CNC rotary tables, etc.

Adjustable concentricity screws, permit adjustment to 0.000050" TIR. Internal stops eliminate length changes due to collet drawback. Complete Hand and Foot Valve Kits are available to free operators' hands for efficient part handling, and also permit air pressure adjustability for fragile workpieces. Special Rotary Unions permit spindle speeds to 3600 RPM; as a result, no frictional heat is generated by the Air Collet Chuck.

Standard shop air activates the Air Collet Chuck, while the spring loaded piston design inhibits any occurrence of collet sticking.

AIR COLLET CHUCK OPTIONS

Part #	Description
ACC5C4T	5C Air Collet Chuck with 4° Taper Nose
ACC5C-2.1875-T	5C Air Collet Chuck with 2.1876" Threaded Nose
ACC2J	2J Air Collet Chuck, Plain Nose
ACC3J	3J Air Collet Chuck, Plain Nose
ACC16C	16C Air Collet Chuck, Plain Nose

**Largest Outside Diameter 6.437" on all above units*



CENTERING PLUG
CENTER PLUG



ROTARY UNION
ACCAU



MACHINABLE ADAPTER
ACC-ADPT-BLANK

ACCESSORIES

Part #	Description
ACC-3HV-KIT	Hand Valve Kit, consisting of 3-way hand valve, air regulator, gage, and (1) hose 72" long w/ fittings
ACC-3FV-KIT	Foot Valve Kit, consisting of 3-way foot valve, air regulator, gage, and (1) hose 72" long w/ fittings
ACCAU	Rotary Union for Air Collet Chuck Air Supply Lines
CENTER PLUG	Spindle Centering Plug for ACC Air Supply Line
ACC-ADPT-BLANK	Machinable Adapter for Dunham Air Collet Chucks
AIRTUBE24	24" Cut to fit Air Supply Tube for Air Collet Chucks



HAND VALVE KIT
ACC-3HV-KIT

AIR COLLET CHUCK



Dunham Air Collet Chuck in Stationary Mount for Milling Operation



THREADED NOSE MODEL

ACC5C-2.1875-T

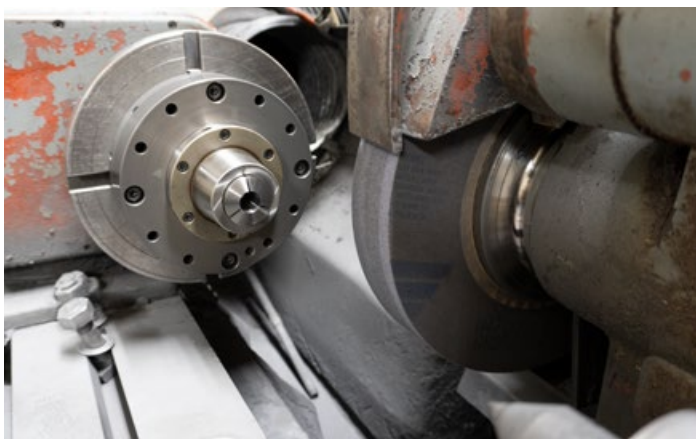


4° TAPER NOSE MODEL

ACC5C4T



Air Chuck Mounted on 4th Axis Indexer



Air Chuck Mounted for use on Grinding Machine

FEATURES & BENEFITS

- Eliminates the need for costly four (4) way valve, by using only one air line through the spindle to the chuck (rotary applications) or through the side air port (stationary applications).
- Power Factor: 15x line pressure i.e. at 100 P.S.I. line pressure exerts a pull force of more than 1500 lbs. on the collet.
- Built-in Concentricity Flange permits adjusting concentricity to new standards of collet accuracy - improving TIR on all collets
- Simple face plate mounting or special spindle mounts to suit customer requirements.
- Collet Sticking greatly reduced by positive spring boosted return.
- Backing plate is threaded 1/4"-20 for positive, non-drawback, internal stops.
- Collet gripping power can be uniformly controlled by regulating air pressure.
- Lightweight--Air Collet Chuck weighs less than 9 lbs. and generates no frictional heat.

COLLET CHUCKING SYSTEMS FOR CNC LATHES



5C THREADED NOSE
DTC-5CTHD-A5



5C 4° TAPER NOSE
DTC-5C-4T-A6



16C COLLET CHUCKS
DTC-16C-A6

Dunham's productivity enhancing Collet Chuck assemblies are designed for converting CNC lathes to workholding devices utilizing 5C, 2J, 3J, and 16C collets. With a built-in concentricity adjustment (under 0.00050" TIR) they can be mounted directly to American Standard (A4, A5, A6, A8) and Camlock (D4, D5, D6, D8) style spindles.

Only one complete chuck assembly is required because each spindle adapter of the assembly will accept any Dunham Tool 16C, 2J, 3J and 5C collet adapter. Change-over is accomplished quickly and easily by the removal and replacement of only six bolts on the collet adapter.

Compact, lightweight, and unaffected by centrifugal force, each collet chuck's balanced design allows high speed turning of small parts to 1 3/4" in diameter. Tool interference is minimized by the chuck's small body diameter.

Dunham lathe chucks are frequently used on cylindrical grinders, rotary tables, and many other machines. Our team of experts will provide you with the correct mounting and draw tube adapters to accommodate your machines requirements.

Machines using a closer and drawtube may require an additional drawtube to collet adapter which is available separately.

FEATURES & BENEFITS

- Designed for Easy and Fast Mounting.
- Built-In Concentricity Adjustment. (under 0.00050" TIR)
- Light Weight Permits Higher Turning Speeds.
- Small Body Diameter Reduces Tool Interference.



AMERICAN STANDARD SPINDLE MOUNTS

Spindle Type	5C Collet Chuck 1-1/16" Bar Capacity 4° Tapered Nose	5C Collet Chuck 1-1/16" Bar Capacity Threaded Nose	2J Collet Chuck 1-3/8" Bar Capacity	16C Collet Chuck 1-5/8" Bar Capacity	3J Collet Chuck 1-3/4" Bar Capacity	22J Collet Chuck 2-1/4" Bar Capacity
A2-4	DTC-5C-4T-A4	DTC-5CTHD-A4	DTC-2J-A4	DTC-16C-A4	DTC-3J-A4	—
A2-5	DTC-5C-4T-A5	DTC-5CTHD-A5	DTC-2J-A5	DTC-16C-A5	DTC-3J-A5	—
A2-6	DTC-5C-4T-A6	DTC-5CTHD-A6	DTC-2J-A6	DTC-16C-A6	DTC-3J-A6	DTC-22J-A6
A2-8	DTC-5C-4T-A8	DTC-5CTHD-A8	DTC-2J-A8	DTC-16C-A8	DTC-3J-A8	DTC-22J-A8

Call us for more unique and custom models.

CAMLOCK SPINDLE MOUNTS

Spindle Type	5C Collet Chuck 1-1/16" Bar Capacity 4° Tapered Nose	5C Collet Chuck 1-1/16" Bar Capacity Threaded Nose	2J Collet Chuck 1-3/8" Bar Capacity	16C Collet Chuck 1-5/8" Bar Capacity	3J Collet Chuck 1-3/4" Bar Capacity
D1-4	DTC-5C-4T-D14	DTC-5CTHD-D14	—	—	—
D1-5	DTC-5C-4T-D15	DTC-5CTHD-D15	—	—	—
D1-6	DTC-5C-4T-D16	DTC-5CTHD-D16	DTC-2J-D16	DTC-16C-D16	DTC-3J-D16
D1-8	DTC-5C-4T-D18	DTC-5CTHD-D18	DTC-2J-D18	DTC-16C-D18	DTC-3J-D18

Call us for more unique and custom models.

PRECISION CARTRIDGE SPINDLES



2000SPASSM5MT



2705SPASSM5C



5000SPASSM16C

Designed for building into a base or headstock, the Model 2000 cartridge spindle is a two-bearing unit, which accommodates 5C or 2J collets and three, four, or six jaw chucks. Our 5000 Model is a heavy-duty, five-bearing spindle for 16C Collets. These spindles operate up to 6,000 RPM and offer the same basic specifications as the Dunham 50M Centric Spindles.

The 6,000 RPM, 0.000050" TIR capacity is provided by spring compensation which considerably expands capabilities of the cartridge spindles. In addition to the basic cartridge spindles, Dunham can also provide our Air Actuated Collet Closer, pulley, and headstock casting to simplify the construction of custom machinery using these cartridges.

Dunham's precision spindles are used by many O.E.M's and job shops for creating custom power-driven work or toolholders.

FEATURES & BENEFITS

- High precision construction for turning, polishing, deburring, and finishing use.
- 3,500 – 6,000 RPM range.
- Accuracy to 0.000050" TIR.
- Easily incorporated into custom machines.
- Built-in air purge keeps coolant, chips, and swarf out of the spindle mechanism using 5 PSI clean shop air.

Dunham precision 2000 and 5000 Model cartridge spindles operate to 6,000 RPM and 0.000050" TIR accuracy. Spindles are sealed with air purge capability.



Dunham Cartridge Spindle mounted in headstock with Air Collet Closer.

SPECIFICATIONS

Specification	Model 2000	Model 5000
Capacity (thru-hole)	5C or 2J Collet	16C or 3J
Spindle Mount	4° Taper or A2-3	A2-5
RPM Maximum	3,500 - 6,000	3,500 - 6,000
Accuracy	0.000050" TIR	0.000050" TIR
Construction	2-Bearing	5-Bearing
Weight	28 LBS.	50 LBS.



50M CENTRIC SPINDLE/HEADSTOCK

IDEAL FOR BUILDING YOUR OWN 5C EQUIPMENT

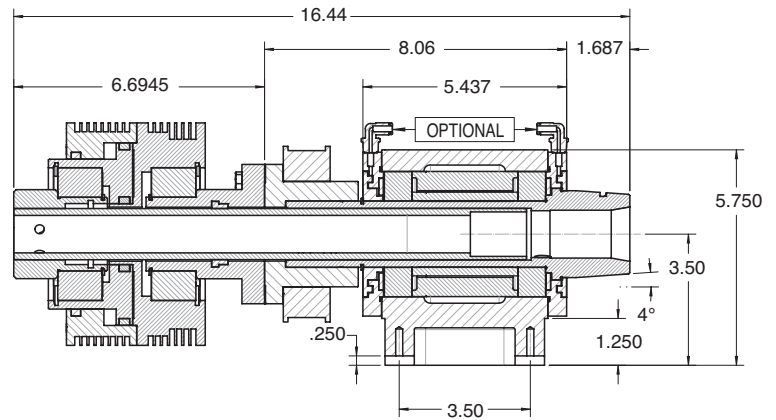
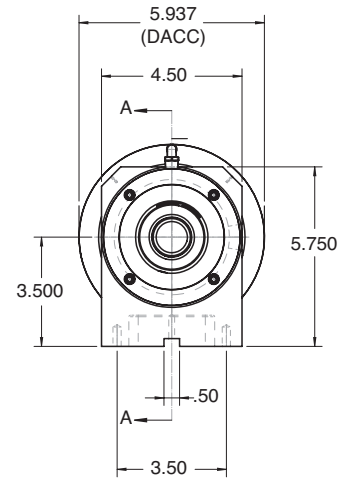


50MT-DACC-TP

Our highly accurate and durable Dunham 50M Centric Spindle Headstocks come in a variety of configurations and can be used for the creation of polishing/grinding machines, special lathes, rotary welders, robotic applications, accurate inspection heads, or aid in the building of customized equipment that accepts 5C Collets.

The Dunham 50M spindle is rated for up to 5,000 RPM, or at 3,600 RPM when fully equipped with a standard Dunham Air Collet Closer (DACC) and pulley assembly (V-Belt or Timing Pulley).

Models are available with either a Plain or 4° Taper Nose design, and can be used in a variety of mounting platforms, either horizontal or vertical.



FEATURES & BENEFITS

- Pre-loaded ball bearing precision spindle with 0.00005" TIR accuracy.
- Rugged 28 LB. gray iron body.
- Standard units accept all 5C collets; also available in 3C & other special collet sizes.
- Units can be bench mounted, used to replace worn workheads on lathes or grinders, or for building new equipment.
- Taper nose model accepts step chucks to 6" diameter, 3-4-6 jaw chucks.
- Air Collet Closer has 1-1/16" clearance through draw tube, providing even gripping pressure even with .005" part diameter variations.



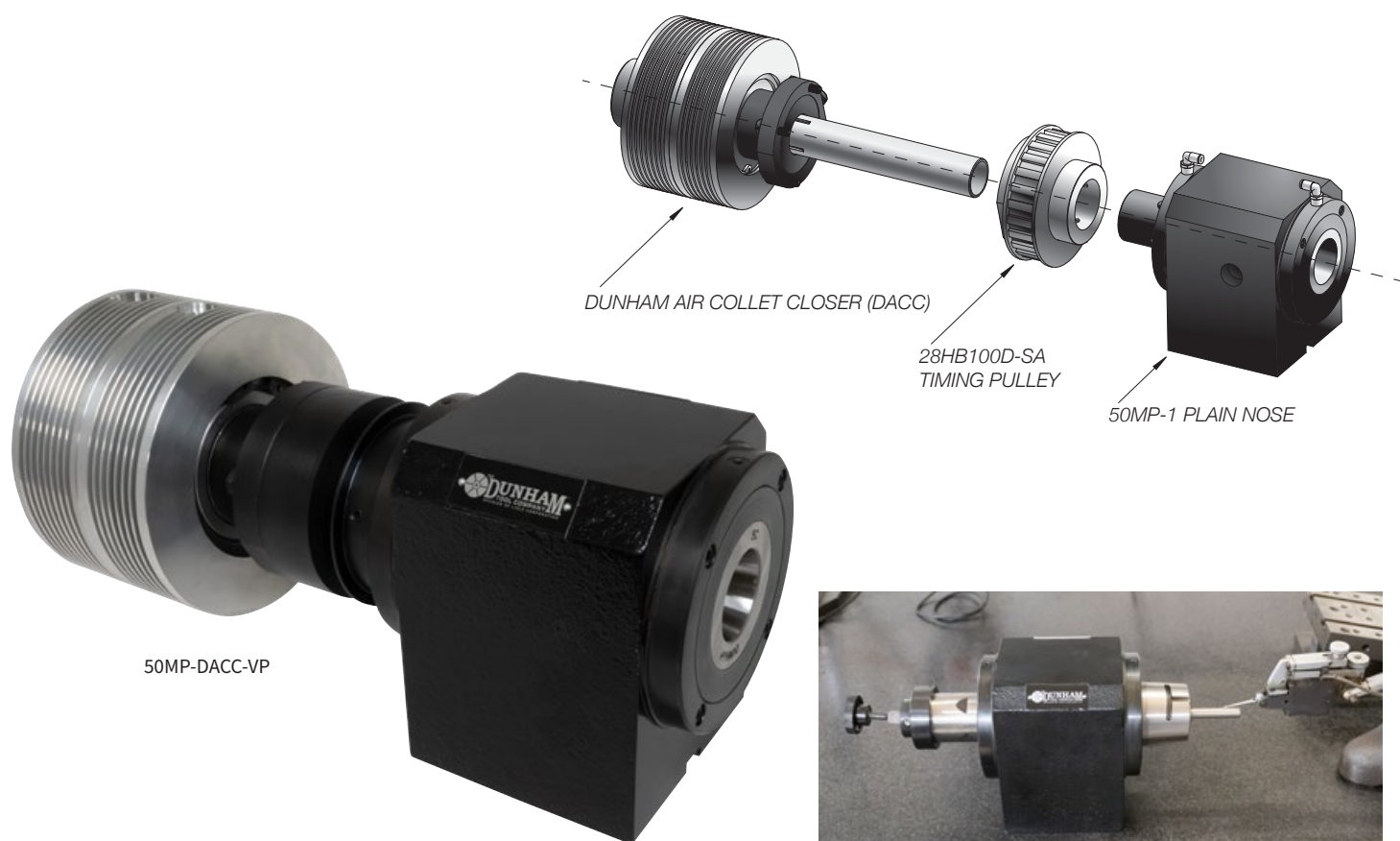
50MT-2 (4° TAPER NOSE)



50MP-1 (PLAIN NOSE)



50M CENTRIC SPINDLE ASSEMBLIES

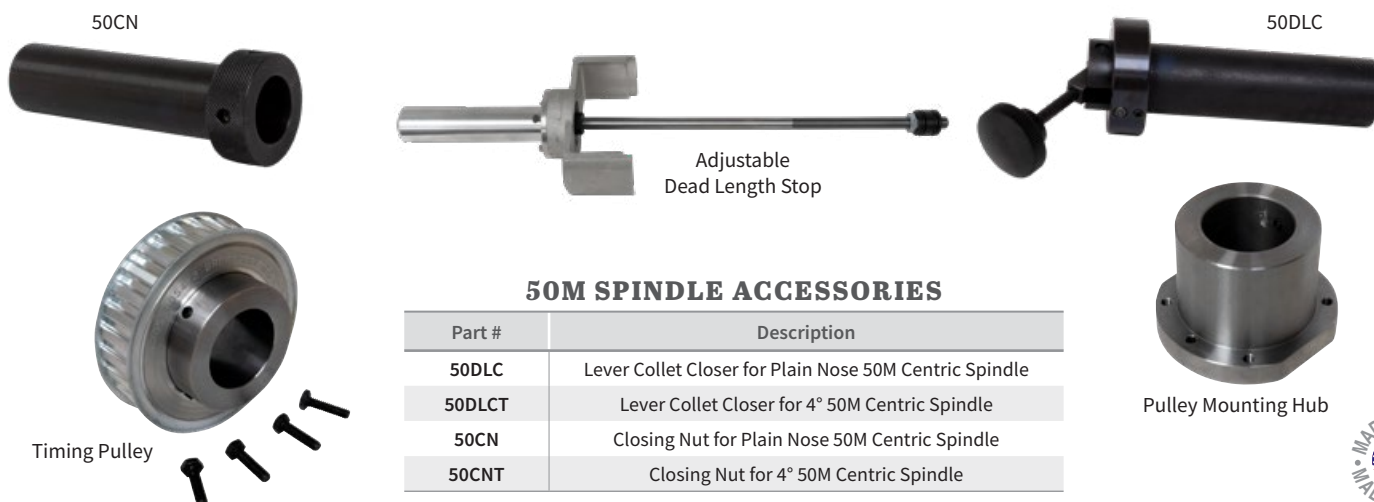


Demonstrating Inspection Process Using a 50MT-2 Series Spindle

SERIES 50M SPINDLES (CENTRIC)

Plain Nose Model #	4° Taper Nose Model #	Description
50MP-1	50MT-2	50M Centric Spindle Headstock, RPM rating 5,000. (closer & pulley not included)
*50MP-DACC-TP	*50MT-DACC-TP	50M Centric Spindle Headstock, with 5C Air Collet Closer (Model--DACC), Draw Tube, and Timing Pulley -RPM Rating 3600
*50MP-DACC-VP	*50MT-DACC-VP	50M Centric Spindle Headstock, with 5C Air Collet Closer, (Model--DACC), Draw Tube, and V-Belt Pulley . RPM Rating 3600

* Complete assemblies ship aligned and fully assembled.



50M SPINDLE ACCESSORIES

Part #	Description
50DLC	Lever Collet Closer for Plain Nose 50M Centric Spindle
50DLCT	Lever Collet Closer for 4° 50M Centric Spindle
50CN	Closing Nut for Plain Nose 50M Centric Spindle
50CNT	Closing Nut for 4° 50M Centric Spindle



5C COLLETS



Dunham Precision Grade 5C Collets are manufactured with the same precise standards built into all Dunham Tool products. Designed for O.D. Gripping Applications, they are Hardened & Ground, Made of High Grade Steel for Long Wear Life, and are Accurate to within .0005" TIR. Available Individually or in Complete kits!



5C COLLET ROUND

Part Number	Collet Size	Part Number	Collet Size	Part Number	Collet Size	Part Number	Collet Size	Part Number	Collet Size
501004	1/16"	501017	17/64"	501030	15/32"	501043	43/64"	501056	7/8"
501005	5/64"	501018	9/32"	501031	31/64"	501044	11/16"	501057	57/64"
501006	3/32"	501019	19/64"	501032	1/2"	501045	45/64"	501058	29/32"
501007	7/64"	501020	5/16"	501033	33/64"	501046	23/32"	501059	59/64"
501008	1/8"	501021	21/64"	501034	17/32"	501047	47/64"	501060	15/16"
501009	9/64"	501022	11/32"	501035	35/64"	501048	3/4"	501061	61/64"
501010	5/32"	501023	23/64"	501036	9/16"	501049	49/64"	501062	31/32"
501011	11/64"	501024	3/8"	501037	37/64"	501050	25/32"	501063	63/64"
501012	3/16"	501025	25/64"	501038	19/32"	501051	51/64"	501064	1"
501013	13/64"	501026	13/32"	501039	39/64"	501052	13/16"	501065	1-1/64"
501014	7/32"	501027	27/64"	501040	5/8"	501053	53/64"	501066	1-1/32"
501015	15/64"	501028	7/16"	501041	41/64"	501054	27/32"	501067	1-3/64"
501016	1/4"	501029	29/64"	501042	21/32"	501055	55/64"	501068	1-1/16"

5C COLLET ROUND-METRIC

Collet Part #	Size "M"	Collet Part #	Size "M"	Collet Part #	Size "M"
501003M	3	501011M	11	501019M	19
501004M	4	501012M	12	501020M	20
501005M	5	501013M	13	501021M	21
501006M	6	501014M	14	501022M	22
501007M	7	501015M	15	501023M	23
501008M	8	501016M	16	501024M	24
501009M	9	501017M	17	501025M	25
501010M	10	501018M	18	501026M	26

5C COLLET SETS

Part #	Description "Round 5C"
501S07	7 Piece Set: 1/4" - 1" in 1/8" Increments
501S15	15 Piece Set: 1/8" - 1" in 1/16" Increments
501S17	17 Piece Set: 1/16" - 1" in 1/16" Increments
501S33	33 Piece Set: 1/16" - 1-1/16" in 1/32" Increments
501S65	65 Piece Set: 1/16" - 1-1/16" in 1/64" Increments

5C COLLET HEX



Collet Part #	Size "INCH"	Collet Part #	Size "INCH"
511008	1/8"	511036	9/16"
511012	3/16"	511040	5/8"
511016	1/4"	511044	11/16"
511020	5/16"	511048	3/4"
511024	3/8"	511052	13/16"
511028	7/16"	511056	7/8"
511032	1/2"	—	—



5C COLLET SQUARE

Collet Part #	Size "INCH"	Collet Part #	Size "INCH"
521008	1/8"	521028	7/16"
521012	3/16"	521032	1/2"
521016	1/4"	521036	9/16"
521020	5/16"	521040	5/8"
521024	3/8"	521044	11/16"

R8 COLLETS

Dunham Precision Grade R8 Collets allow for more rapid tool changes, providing an inexpensive and accurate tool holding method. Manufactured with the same high quality standards built into all Dunham Tool products, our R8 Collets work with Dunham Tool R8 fixtures as well as most other compatible R8 equipment. Available in both inch and metric sizes, they are typically available from stock.

FEATURES & BENEFITS

- Hardened & Ground
- Precision Grade
- High Grade Steel for Long Wear Life
- Compatible With Most R8 Collet Fixtures
- Reduces Tool Change Time



R8 COLLET SETS

Part #	Description "Round R8"
801S06	6 Piece Set: 1/8" - 3/4" in 1/8" Increments
801S11	11 Piece Set: 1/8" - 3/4" in 1/16" Increments
801S23	23 Piece Set: 1/16" - 3/4" in 1/32" Increments

R8 COLLET ROUND-INCH

Collet Part #	Size "INCH"	Collet Part #	Size "INCH"	Collet Part #	Size "INCH"
801002	1/16"	801010	5/16"	801018	9/16"
801003	3/32"	801011	11/32"	801019	19/32"
801004	1/8"	801012	3/8"	801020	5/8"
801005	5/32"	801013	13/32"	801021	21/32"
801006	3/16"	801014	7/16"	801022	11/16"
801007	7/32"	801015	15/32"	801023	23/32"
801008	1/4"	801016	1/2"	801024	3/4"
801009	9/32"	801017	17/32"	801028	7/8"

R8 COLLET ROUND-METRIC

Collet Part #	Size "MM"	Collet Part #	Size "MM"	Collet Part #	Size "MM"
801003M	3	801011M	11	801019M	19
801004M	4	801012M	12	801020M	20
801005M	5	801013M	13	801021M	21
801006M	6	801014M	14	801022M	22
801007M	7	801015M	15	—	—
801008M	8	801016M	16	—	—
810009M	9	801017M	17	—	—
801010M	10	801018M	18	—	—

MACHINE SHOP ACCESSORIES BY *Lisle*



CHUCK STOPS



5C COLLET WRENCH



AIR HOSE HOLDER



MINI FLEXIBLE
TELESCOPING MAGNETIC
PICKUP



5C/16C COLLET STOPS



WISE JAWS PADS



MASTER CHUCK KEY



MARKING SCRIBE



VACUUM SEAL



FLEXIBLE LIGHT
HOLDER



MAGNETIC SOLDERING
CLAMP



HEX KEY SETS



807 East Main • Clarinda, Iowa, 51632 • 712-542-1908

DUNHAM TOOL HISTORY

Dunham Tool was founded in 1958/1959 by Russell and Beverly Dunham in New Fairfield, Connecticut. Russell Dunham developed and received a patent for the Dunham Expanding Collet in 1959, and initially manufactured it in his home shop.

After several years, Russell and Beverly built Dunham Tool's first manufacturing facility, also in New Fairfield, Connecticut. The Dunham Expanding Collet was successful in the industrial marketplace, and over many years this success led to the development and manufacture of Dunham Expanding Mandrels, Collet Chucks and Actuators, Spindle Headstocks, Vacuum Chucks, Bar Stock Pullers, Automatic and CNC Lathes (with automatic Loading and Unloading Systems), Adjustable Tool Holders, and many other work holding and tool holding devices. Dunham Tool was awarded many additional patents over the years.

Dunham Tool has earned and maintained its reputation in industry worldwide for innovative, high accuracy and high quality products, excellent customer support and service. Most Dunham products have been developed by listening and responding to our customers' and industries' manufacturing requirements. The Dunham CNC 3000 Lathe

was introduced at the Chicago IMTS Show in 1980, and was one of the first commercially available small CNC Lathes in the marketplace.

In 2004/2005, Dunham Tool decided to refocus its engineering and manufacturing resources on the work and tool holding products (Collets, Collet Chucking Systems, Spindle Headstocks, etc.) and it discontinued manufacturing all Dunham Lathes.

In January 2015 Dunham Tool was acquired by Lisle Corporation of Clarinda, Iowa. Lisle Corporation has been owned and operated by the Lisle family since 1903. Lisle is known as the leading manufacturer of Automotive Specialty Tools, Lubrication Products and Mechanics Creepers. Lisle is committed to the continued and enhanced development and manufacturing of Dunham products and the customer support that Dunham's worldwide customers expect. The company is now the Dunham Tool Company, Division of Lisle Corporation.

For product assistance, call us at 712-542-1908 or e-mail us at dunham@dunhamtool.com so that we can find a solution to your machine tool need.



Turn your workholding and tool ideas into money!

It may be valuable! Lisle corporation currently pays royalties to more than 100 individuals.

If you have an original workholding idea which others may need, we are interested in evaluating your idea!

Your idea may be produced and sold by The Dunham Tool Company under an attractive Award or Royalty Agreement that will bring you income for years to come. Even with a very good tool idea you need someone who can manufacture and sell the tool. If you have a new tool idea, or have identified a problem, follow these two simple steps:

1. Write Lisle and request an Idea Disclosure Agreement or fill out a request form on our website: <https://www.dunhamtool.com/idea-program/>
2. Return the signed agreement to Lisle Corporation. We will promptly evaluate your idea. You will then be notified whether or not we will offer an award or royalty.

I.D.A. Program/Dunham Tool Company
807 E. Main Street/PO Box 89
Clarinda, Iowa USA 51632-0089

<https://www.dunhamtool.com/idea-program/>





LISLE CORPORATION MARKS 118 YEARS OF MANUFACTURING

Lisle Corporation recently celebrated the company's founding and 118 years of continuous manufacturing in Clarinda, Iowa in 2021. The privately owned company is led today by third, fourth, fifth and sixth generation family members.

C.A. Lisle started the company in 1903 with the first product being horse-powered water well drilling machines. To combat the seasonality of the well drilling business, the young company branched out and also manufactured washing machines, cream separators, and push-type reel lawn mowers.

In the mid-20s, Lisle Corporation made its first automotive product, a master ignition vibrator for Ford Model T vehicles. The first Lisle tool, a valve refacer, fast became a repair shop must since valves were reground every 20,000 miles at that time.

In the 1930s the magnetic drain plug line was launched. The line grew steadily and Lisle plugs were used extensively in many pieces of military equipment during World War II. The company was subsequently awarded the Army/Navy E Award for manufacturing excellence in supporting the war effort.

In the post-war 50s, the automotive aftermarket boomed and demand for specialty automotive tools increased. Lisle Corporation made the decision then to grow the company by introducing new tools that could be made in the company's own factory, thereby controlling quality, delivery and costs.

Then a line of mechanic's garage creepers was added through acquisition. The line still is sold today under the Jeepers Creepers brand name.






At this time private label business began to grow. This portion of the business thrives on today. Tools manufactured by Lisle Corporation can be found private labeled under many of the leading tool and automotive part brand names available in the marketplace.

The company has branched out even more in the last decades through acquisitions and constant innovation of new products. Today, Lisle specialty automotive tools, mechanic's creepers, and lubrication & tire products are the preferred line among automotive warehouse distributors and jobbers because Lisle manufactures quality products that are priced right. The specialty automotive tool line now consists of more than 650 products, with the great majority of them being produced at the expanded site of the original factory built in Clarinda, Iowa in 1903.

For product assistance, call us at 712-542-5101 or e-mail us at info@lislecorp.com so that we can find a solution to your machine tool need.



Visit Our Website For More Information And Resources:
<https://www.dunhamtool.com/>

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Solutions Since 1958**



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