

HARDINGE Collet Chuck Systems











STYLE D — PULL-BACK WITH THRU-HOLE

42mm* Style D Spindle Mount:

Pull-back style with thru-hole

Spindle Style	Part Number	D¹ - Diameter	D - Diameter	L ^I - Length	L - Length
A2-5	V42 5D00300	4.016" (102)	5.512" (140)	.846" (21.5)	3.543" (90)
A2-6	V42 6D00400	4.016" (102)	6.496" (165)	.846" (21.5)	3.543" (90)
140mm	V42 140D01700	4.016" (102)	5.906" (150)	.846" (21.5)	3.543" (90)

^{*} Limited to machine capacity. (millimeters in parentheses)

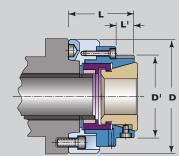
65mm* Style D Spindle Mount

Pull-back style with thru-hole

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Spindle Style	Part Number	D¹ - Diameter	D - Diameter	L ¹ - Length	L - Length
A2-5	V65 5D00500	4.736" (120.3)	6.102" (155)	1.043" (26.5)	3.740" (95)
A2-6	V65 6D00600	4.736" (120.3)	6.496" (165)	1.043" (26.5)	3.740" (95)
A2-8	V65 8D00700	4.736" (120.3)	8.268" (210)	1.043" (26.5)	3.858" (98)
140mm	V65 140D01900	4.736" (120.3)	6.299" (160)	1.043" (26.5)	3.937" (100)

^{*} Limited to machine capacity. Additional lengths available. (millimeters in parentheses)





42 and 65mm systems

BAR WORK

WHY YOU SHOULD CHOOSE FLEXC® PULL BACK CHUCKS

MAIN SPINDLE APPLICATIONS

 Used on main spindle applications where the collet is pulled into the chuck sleeve to close on your part.

ULTIMATE FLEXIBILITY

 Capable of accepting Hardinge Quick Change Adapters. (see page 8)

COMPACT DESIGN

 Compact design allows for optimal tool clearances and maximum machining workspace.

BETTER PART FINISH

 Collet chucks allow for higher RPMs than traditional 3-jaw chucks.

QUALITY ASSURANCE

 Manufactured and assembled in the USA with top grade materials and inspection processes.

ACCURACY IMPROVEMENTS

• .0002'TIR on the closing angle of the chuck.

10X THE GRIP RANGE

• Grip range of +/- .020" allowing for part size variation.

STYLE A — PULL-BACK DESIGN WITH A DEAD-LENGTH® WORKSTOP



42mm* Style A Spindle Mount: Pull-back style with removable dead-length work stop

Spindle Style	Part Number	D¹ - Diameter	D - Diameter	L ¹ - Length	L - Length
A2-5	V42 5A01000	4.016" (102)	5.512" (140)	.610" (15.5)	4.764" (121)
A2-6	V42 6A01100	4.016" (102)	6.496" (165)	.610" (15.5)	4.764" (121)
I40mm	V42 140A01600	4.016" (102)	5.906" (150)	.610" (15.5)	4.961" (126)

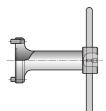
^{*} Limited to machine capacity. (millimeters in parentheses)



65mm* Style A Spindle Mount: Pull-back style with removable dead-length work stop

Spindle Style	Part Number	D¹ - Diameter	D - Diameter	L' - Length	L - Length
A2-5	V65 5A01200	4.736" (120.3)	6.102" (155)	.728" (18.5)	5.118" (130)
A2-6	V65 6A01300	4.736" (120.3)	6.496" (165)	.728" (18.5)	5.118" (130)
A2-8	V65 8A01400	4.736" (120.3)	8.268" (210)	.728" (18.5)	5.315" (135)
I40mm	V65 140A02300	4.736" (120.3)	6.299" (160)	.728" (18.5)	5.248" (133)
170mm	V65 170A01800	4.736" (120.3)	6.299" (160)	.728" (18.5)	5.118" (130)

^{*} Limited to machine capacity. Additional lengths available. (millimeters in parentheses)



Work stop wrench V65-6DL05810 (65mm) is included with the 80mm spindle mount assembly to remove or install the work stop.

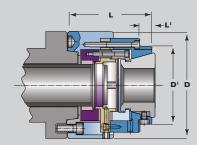
80mm* Style A Spindle Mount: Pull-back style with removable dead-length work stop

Spindle Style	Part Number	D¹ - Diameter	D - Diameter	L ¹ - Length	L - Length
A2-5	V80 5A06600	5.750" (146.1)	7.700" (195.6)	2.000" (50.8)	5.174" (131.4)
A2-6	V80 6A06400	5.750" (146.1)	7.700" (195.6)	2.000" (50.8)	5.174" (131.4)
A2-8	V80 8A06500	5.750" (146.1)	8.000" (203.2)	2.000" (50.8)	5.174" (131.4)

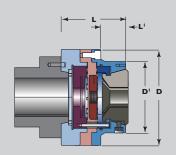
^{*} Limited to machine capacity. (millimeters in parentheses)

BAR SLUG WORK

	V42 5A01006 (M12 X 1.75)
Dead Stop Included	V65 6A01206 (M12 X 1.75)
	V80 6A06407 (1'' - 20)



42 and 65mm systems



80mm systems

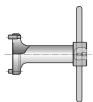
STYLE DL — PUSH-TO-CLOSE DESIGN WITH A DEAD-LENGTH® WORKSTOP



42mm* Style DL Spindle Mount: Push-to-Close with work stop

Spindle Style	Part Number	D¹ - Dia.	D - Dia.	L ^I - Length	L - Length
A2-5 (I)	V42 5DL05400	_	5.315" (135)	_	4.724" (120)
A2-6 (2)	V42 6DL05500	5.315" (135)	6.299" (160)	2.953" (75)	4.724" (120)
140mm (2)	V42 140DL04400	5.315" (135)	5.906 (150)	3.944 (100)	4.724" (120)

^{*} Limited to machine capacity. (millimeters in parentheses)



Work stop wrench V42-5DL05410 (42mm) is included with the spindle mount assembly to remove or install the work stop.

65mm* Style DL Low Profile Spindle Mount:

Push-to-Close with w	vork stop
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Spindle Style	Part Number	D¹ - Dia.	D - Dia.	L ¹ - Length	L - Length
A2-5	V65 5DL05730	4.904" (124.6)	6.299" (160)	1.448" (36.8)	4.845" (123)
A2-6	V65 6DL05930	4.904" (124.6)	6.299" (160)	1.448" (36.8)	4.845" (123)
A2-8	V65 8DL06030	4.904" (124.6)	8.268" (210)	1.448" (36.8)	5.345" (135.8)
I40mm	V65 140DL02430	4.904" (124.6)	6.299" (160)	1.448" (36.8)	4.908" (124.6)

^{*} Limited to machine capacity. (millimeters in parentheses)

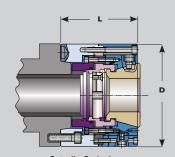
80mm* Style DL Spindle Mount: Push-to-Close with work stop

Spindle Style	Part Number	D¹ - Dia.	D - Dia.	L ¹ - Length	L - Length
A2-5	V80 5DL06100	5.950" (151.2)	7.700" (195.6)	1.354" (34.4)	4.957" (125.9)
A2-6	V80 6DL06200	5.950" (151.2)	7.700" (195.6)	1.354" (34.4)	4.957" (125.9)
A2-8	V80 8DL06300	5.950" (151.2)	8.250" (209.6)	1.354" (34.4)	5.207" (132.3)
140mm	V80 140DL06400	5.950" (151.2)	7.700'' (195.6)	1.354'' (34.4)	5.357" (136.1)

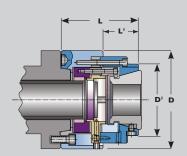
^{*} Limited to machine capacity. (millimeters in parentheses)

BAR SLUG WORK

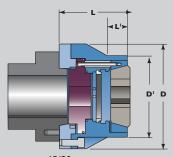
	V42 5DL05406 (M12 X 1.75)
Dead Stop Included	V65 6DL05836 (1'' - 20 assembly)
	V80 6DL06213 (1'' - 20 assembly)



Spindle Style I



Spindle Style 2



65/80mm systems

QUALITY

Hardinge guarantees a collet head concentricity of .0002" (.005mm) TIR for round sizes after the segments are joined in the vulcanization process. Hardinge test results from repeated cycles of collet actuation assure long life of the Hardinge vulcanization process.

FlexC Capacity	Changing Wrench		
42mm	C 4200000-WREN		
65mm	C 65000-00-WREN		
80mm	C 80000-00-WREN		







FAST DELIVERY

Hardinge stocks an extensive inventory of finished collets for all common sizes. Semi-Finished inventory is also available allowing for decimal sized collets to be delivered in 5 days or less.

	Rated Capacity	Round Smooth/ Serrated	Hexagon Smooth/ Serrated	Square Smooth
42mm	fractional	⁷ / ₃₂ to 1 ⁵ / ₈ "	⁵ / ₁₆ to 3/ ₈ "	⁵ / ₁₆ to 1 ⁹ / ₆₄ "
12	metric	5 to 42mm	8 to 36	8 to 29
65mm	fractional	1/4 to 29/16"	⁵ / ₁₆ to 2 ¹ / ₈ "	⁵ / ₁₆ to 1 ¹³ / ₁₆ "
0311111	metric	5 to 65mm	8 to 56	8 to 46
80mm	fractional	¹⁵ / ₃₂ to 3 ¹ / ₄ "	$^{15}/_{32}$ to $2^{3}/_{4}$ "	¹⁵ / ₃₂ to 2 ¹ / ₄ "
00111111	metric	12 to 82.5mm	12 to 69.9	12 to 57.2



CUSTOM MANUFACTURING

Hardinge's custom engineering department can design and manufacture special FlexC collets for any application. Sample applications include stepped holes, special shapes, off-center and more.









EMERGENCY COLLETS

	Size / Pilot Hole	Part Number	Boring Ring
42mm	5mm Pilot	C0420000000005	
	15mm Pilot	C042000000015	C042000000RING
	30mm Pilot	C0420000000030	
65mm	8mm Pilot	C0650000000008	
	20mm Pilot	C0650000000020	C065000000RING
	40mm Pilot	C0650000000040	
80mm	12mm Pilot	C080000000012	
	25mm Pilot	C0800000000025	C080000000RING
	40mm Pilot	C0800000000040	





ULTIMATE QUICK CHANGE FLEXIBILITY

FlexC 65 Adapters are ideal for shops looking for ultimate flexibility! Now in one setup a customer can use multiple workholding options, eliminating costly and time consuming changeovers! In one setup you can use:

- FlexC Quick Change Collets
- 5C Collets
- Sure-Grip Expanding Collets
- 5C Step Chucks & Closers

SINGLE SETUP

FOR CNC LATHES



MANUAL COLLET BLOCK



FLEXC® COLLETS



When accuracy, grip range and grip strength is needed, FlexC collets are a perfect option. FlexC collets have .0002"TIR and +/- .020" grip range.

Capacity
42mm
65mm
80mm



STANDARD SURE-GRIP EXPANDING ADAPTERS

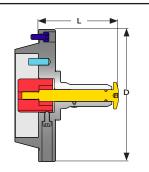




You can now utilize Hardinge's Sure-Grip expanding system in our FlexC 65 products! Hardinge® Sure-Grip® Expanding Collet Systems offer solutions to difficult machining problems where ID gripping is required. Sure-Grip collets have .015" expansion range and .0002"TIR.

Part Number*	Grip Range	D - Diameter	L - Length
V65 2001000	1/2" to 3/4"	4.891" (124.23)	2.087" (53.01)
V65 2501000	3/4" to 1"	4.891" (124.23)	2.483" (63.07)
V65 3001000	to	4.891" (124.23)	2.947" (74.85)
V65 4001000		5.25" (133.35)	3.536" (89.81)
V65 5001000	2 I/4" to 3"	5.25" (133.35)	4.274" (108.56)
V65 6001000	3" to 4"	5.25" (133.35)	4.337" (110.16)

^{*} requires part number V65 5C01000 for use.



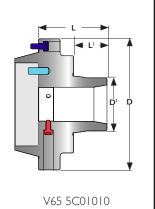
Sure-Grip Expanding Collet

5C COLLET ADAPTER



Hardinge's 5C Spindle tooling has been an industry standard for over 100 years. Customers can now utilize their 5C spindle tooling in our FlexC 65 system for applications that are ideally suited for these style collets. Ideal applications include extended nose, small hole, special shapes, Internal Gripping and more!

ltem	Part Number	D ^I Diameter	D Diameter	L ^I Length	L Length
5C Collet	V65 5C01010S	1.984"	4.891"	1.25"	2.5625"
Adapter		(50.39)	(124.23)	(31.75)	(65.09)



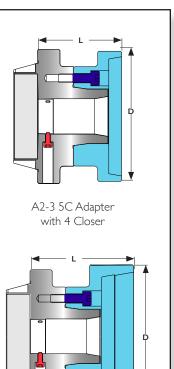
STANDARD 5C STEP CHUCKS & A2-3 CLOSERS



Don't limit your machine setup to the capacity of the FlexC 65. With our 5C adapter, customers can now use Hardinge's Step Chucks and Closers allowing for part sizes of up to 6". Castings, moldings, stampings and machined parts are held rigidly and accurately. Tubing can be held without crushing or distorting. Accurate gripping, the same as with collets, is yours when you use regular and extra depth capacity step chucks for holding larger diameters.

ltem	Part Number	Step Chuck Size	D - Diameter	L - Length
Regu-	V65 235C2RD	2"	3.0625" (77.79)	3.0625" (77.79)
lar Depth	V65 235C3RD	3"	3.75" (95.25)	3.0625" (77.79)
РСР	V65 235C4RD	4"	4.75" (120.65)	3.0625" (77.79)
	V65 235C5RD	5"	5.75" (146.05)	3.0625" (77.79)
	V65 235C6RD	6"	6.75" (171.45)	3.0625" (77.79)

ltem	Part Number	A2-3 Closer Size	D - Diameter	L - Length
Extra	V65 235C2ED	2"	3.625" (92.08)	3.8125" (96.84)
Depth	V65 235C3ED	3"	4.25" (107.95)	3.8125" (96.84)
	V65 235C4ED	4"	5.25" (133.35)	3.8125" (96.84)
	V65 235C5ED	5"	6.25" (158.75)	3.8125" (96.84)
	V65 235C6ED	6"	7.25" (184.15)	3.8125" (96.84)



A2-3 5C Adapter with 4 ED Closer

MASTER COLLET & PADS

FlexC Style-S Master Collets	Part Number	"S" Pad*
	C0650S16MASTER	SI6
65mm	C0650S20MASTER	S20
	C0650S22MASTER	S22
	C0800S26MASTER	S26
80mm	C0800S30MASTER	S30

	Part Number
\$16, \$20 and \$26	
B Clamp assy	7619
B wrench	7637
S22 and S30	
C Clamp assy	7627
C wrench	7639
	•



EJECTORS

Hardinge Spring Part Ejectors

Hardinge's standard spring ejectors are used to push a part into the parts catcher or conveyor when finished. These standard spring ejectors have a limited amount of stroke and apply consistent force, regardless of part size.



Part Number	Chuck Model
1057000000042A	42A
105700000042DL	42DL
1057000000065A	65A
327300000065DL	65DL
3273000000080A	80A
327300000080DL	80DL
A= Pull back w/stop; DL= Dead length	

Long Stroke, Variable Speed Part Ejector

The Hardinge JL-Series Variable Speed Part Ejector is used when maximum stroke and flexibility is needed. This part ejector has 4.4" of stroke and allows users to adjust the rate of speed at which the ejection rod will push the part out, making sure the part is ejected exactly how you want every time!



Part Number	Chuck Model
Long Stroke, Variable Sp	eed
JL 000100065A	65A
JL 000100065DL	65DL
JL 000100080A	80A
JL 000100080DL	80DL
A= Pull back w/stop; DL= Dead length	

Patent Pending

FlexC Part Stops

A part stop is used to accurately locate z-axis positioning of slug work within a collet. These easy to install stops are adjustable for desired part length. The rigid design of these part stops allows peace of mind knowing that your part length will remain consistent part to part.





Part Number	Chuck Model
Solid Stops	
1049000000042A	42A
104900000042DL	42DL
1049000000065A	65A
V65 6DL05836	65DL
3269000000080A	80A
326900000080DL	80DL
A= Pull back w/stop; DL= Dead length	

SAME-DAY SHIPPING

- Hardinge holds to a strict 95% same day ship rate for all standard Workholding products.
 Serving our customer requests quickly is our goal.
- Hardinge stocks more than 15,000
 Workholding SKUs in our in-house inventory.
 We ship every day, all day, to serve our customers.

CUSTOMER SUPPORT

- Our fully staffed team of experienced customer service representatives will help you from product identification to shipment.
- Accomplished Engineers, averaging over 20 years of service to the industry, making that special application easy for you.

SHOPHARDINGE.COM



WHY WOULD I WANT TO USE COLLETS ON MY JAW-CHUCK LATHE?

To Increase Productivity over 3-Jaw Chucks

- Faster job changeover using collets:
 —5C, 16C, 3J, 20C, 25C, S15, S20, S26, S30
- Higher spindle speeds for reduced cycle times

To Increase Capability over 3-Jaw Chucks

- More work envelope to machine longer workpieces
- Achieve higher precision
- Interchangeable Style "S" master pads accommodate a wide range of workpiece sizes and configurations

To Increase Control over 3-Jaw Chucks

- Exact part length control
- Improved concentricity for optimum part roundness



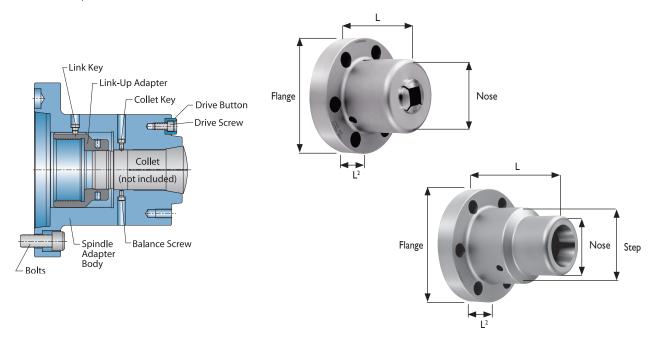


Additionally, centrifugal force is not an issue with Collet Adaptation Chucks. Your machine can operate at the maximum rpm your tooling will allow. Higher rpm means more pieces per hour and higher profits. Review our brochure and select the HCAC Collet Adaptation Chuck that best meets your requirements.

Link-ups can be designed to fit your specific machine. The same link-up can then be used for the entire line of workholding elements including internal Sure-Grip® Collet applications.

Custom-manufacturing available, please call 800-843-8801.

Collet Adaptation Chucks for CNC Lathes



Collet Adaptation Chucks Plain and Stepped - Dimensions

Spindle- to-Collet	Assembly Part Number	Spindle	Length L	Length L2	Flange OD	Step OD	Nose OD	Collet Thru Capacity	
A2-5 5C-35	78010000000000	A2-5	3.500" (88.90)	1.000" (25.40)	5.250" (133.35)	_	3.250" (82.55)	1.0625" (26.98)	
A2-5 5C-50	78030000000000	A2-5	5.000" (127.00)	1.000" (25.40)	5.250" (133.35)	_	3.250" (82.55)	1.0625" (26.98)	
A2-5 16C-60	78170000000000	A2-5	6.000" (152.40)	1.000" (25.40)	5.250" (133.35)	_	3.250" (82.55)	1.625" (41.27)	
A2-5 3J-55	78110000000000	A2-5	5.500" (139.70)	1.000" (25.40)	5.250" (133.35)	_	3.250" (82.55)	1.750" (44.45)	
A2-6 5C-50	78050000000000	A2-6	5.000" (127.00)	1.125" (28.57)	6.500" (165.10)	4.250" (107.95)	3.250" (82.55)	1.0625" (26.98)	
A2-6 5C-60	78070000000000	A2-6	6.000" (152.40)	1.125" (28.57)	6.500" (165.10)	4.250" (107.95)	3.250" (82.55)	1.0625" (26.98)	
A2-6 16C-60	78190000000000	A2-6	6.000" (152.40)	1.125" (28.57)	6.500" (165.10)	4.250" (107.95)	3.250" (82.55)	1.625" (41.27)	
A2-6 3J-60	78130000000000	A2-6	6.000" (152.40)	1.125" (28.57)	6.500" (165.10)	4.250" (107.95)	3.250" (82.55)	1.750" (44.45)	
A2-8 16C	97Z0000904853M	A2-8	6.500" (165.10)	1.250" (31.75)	8.250" (209.55)	5.500" (139.70)	3.250" (82.55)	1.625" (41.27)	
A2-8 3J-60	78150000000000	A2-8	6.000" (152.40)	1.250" (31.75)	8.250" (209.55)	5.500" (139.70)	3.250" (82.55)	1.750" (44.45)	
Note: A link-up	Note: A link-up adapter is required for these chucks. (Millimeters in Parentheses) * For sub-spindle application.								

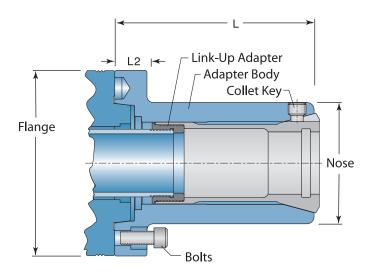
Collet and Collet Slot Spanners

Collet Style	Collet Slot Spanner Part Number	Collet Spanner Replacement Finger Set		
5C	78990000000000	7899000000FNGR		
16C	7901000000003J	7901000000FNGR		
3J	7901000000003J	7901000000FNGR		



PULL-BACK DESIGN STYLE "S"

Collet Adaptation Chucks for CNC Lathes





Collets and pads sold separately unless indicated otherwise.

Collet Adaptation Chucks Plain and Stepped - Dimensions

Spindle- to-Collet	Assembly Part Number	Spindle	Length L	Length L2	Flange OD	Nose OD	Collet Thru- Capacity
A2-5 S15-55	78230000000000	A2-5	5.500" (139.70)	1.000" (25.40)	5.250" (133.35)	3.250" (82.55)	1.500" (38.10)
A2-6 S20	78370000000200*	A2-6	5.500" (139.70)	1.125" (28.57)	6.500" (165.10)	4.250" (107.95)	2.000" (50.80)
A2-6 S26-65	97Z0000909619N*	A2-6	6.500" (165.10)	1.125" (28.57)	6.500" (165.10)	5.250" (133.35)	2.625" (66.67)
A2-6 S30	97Z0000907816N*	A2-6	7.125" (180.98)	1.125" (28.57)	6.500" (165.10)	5.500" (139.70)	3.000" (76.20)
A2-8 S26	78370000000300*	A2-8	6.250" (158.75)	1.250" (31.75)	8.250" (209.55)	5.500" (139.70)	2.625" (66.67)
A2-8 S30	97Z0000909352P*	A2-8	7.125" (180.97)	1.250" (31.75)	8.250" (209.55)	5.500" (139.70)	3.000" (76.20)

 $Note: Collet\ Chucks\ require\ a\ link-up.*\ Master\ collet\ included\ with\ collet\ adaptation\ chuck.\ Pads\ sold\ separately.\ (Millimeters\ in\ parentheses)$



Collet Slot Spanners

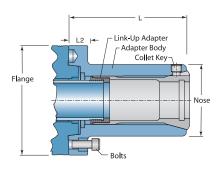
Collet Style	Collet Slot Spanner Part Number
S15	79010000000S15
S20	79010000000S20
S26	79010000000S26
S30	79010000000S30



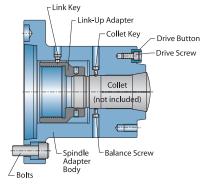
Collet Adaptation Chucks for CNC Lathes



A2-6 to A2-5 16C Collets sold separately



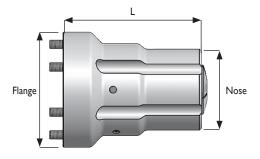
A2-6 to A2-5 I6C



A2-8 to A2-5 I6C

Spindle-to-Spindle Collet Adaptation Chucks – Dimensions

Spindle- to Collet	Assembly Part Number	Spindle	Length L	Length L2	Flange OD	Nose OD	Thru- Capacity	
A2-5 to A2-5 16C	78330000000000	A2-5	6.125" (155.57)	_	5.250" (133.35)	_	1.625" (41.27)	
A2-6 to A2-5 16C	79030000000000	A2-6	6.000" (152.40)	1.125" (28.57)	6.500" (165.10)	5.250" (133.35)	1.625" (41.27)	
A2-8 to A2-5 16C	97Z0000900546N	A2-8	6.000" (152.40)	1.250" (31.75)	8.250" (209.55)	5.250" (133.35)	1.625" (41.27)	
Note: A link-up adapter is required for these chucks. (Millimeters in Parentheses)								

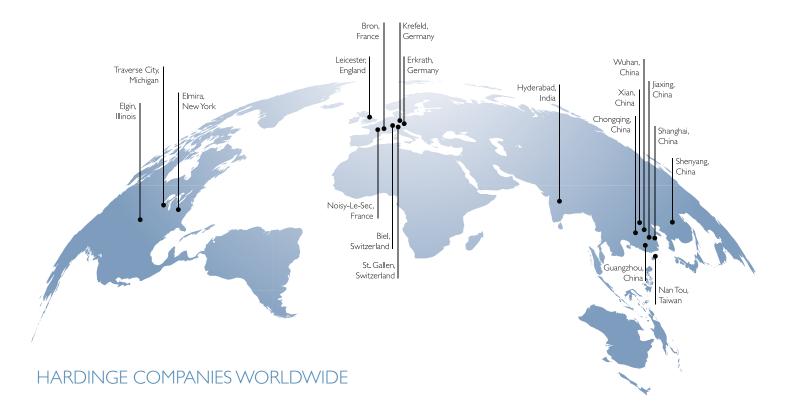


Collets sold separately

DEAD-LENGTH® DESIGN

Dead-Length Collet Adaptation Chuck – Lathe Collets

Spindle-to-Collet	Assembly Part Number	Spindle	OAL L	Flange OD	Nose OD	Thru-Capacity				
5C	Standard 5C Collets									
A5-5C-DL	780300000005HB	A2-5	5.250" (133.35)	5.250" (133.35)	2.500" (63.50)	1.062" (26.97)				
A6-5C-DL	780500000005HB	A2-6	5.750" (146.05)	6.500" (165.10)	2.500" (63.50)	1.062" (26.97)				
16C	6C Standard I6C Collets									
A6-16C-DL	781900000005HB	A2-6	6.750" (171.45)	6.500" (165.10)	3.750" (95.25)	1.625" (41.27)				
A8-16C-DL	782100000005HB	A2-8	6.750" (171.45)	8.250" (209.55)	3.750" (95.25)	1.625" (41.27)				
16C	Small Body, Standard	I6C Collets	S							
A5-16C-DLS	781700000005HB	A2-5	6.125" (155.58)	5.250" (133.35)	3.375" (85.73)	1.625" (41.27)				
3 Standard 3 Collets										
A6-3J-DL	781300000005HB	A2-6	6.187" (157.14)	6.500" (165.10)	3.750" (95.25)	1.750" (44.45)				
A8-3J-DL	781500000005HB	A2-8	6.187" (157.14)	8.250" (209.55)	3.750" (95.25)	1.750" (44.45)				
3] Small Body, Standard 3] Collets										
A5-3J-DLS	781100000005HB	A2-5	5.562" (141.27)	5.250" (133.35)	3.750" (95.25)	1.750" (44.45)				
Note: Overall length (OAL) is for chuck assembly only. OAL may vary depending on spindle mount. (Millimeters in Parentheses)										



Over the years, The Hardinge Group™ steadily diversified both its product offerings and operations. Today, the company has grown into a globally diversified player with manufacturing operations in North America, Europe and Asia. In addition to designing and building turning centers and collets, Hardinge is a world leader in grinding solutions with the addition of the Kellenberger, Jones & Shipman, Hauser, Tschudin, Usach and Voumard brands to the Hardinge family. The company also designs and manufactures Bridgeport machining centers and other industrial products for a wide range of material cutting, turnkey automation and workholding needs.

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