

HARDINGE WORKHOLDING

FlexC® QUICK CHANGE
COLLET SYSTEM

2024 Edition



AMERICAN MADE
WORKHOLDING

 **HARDINGE®**

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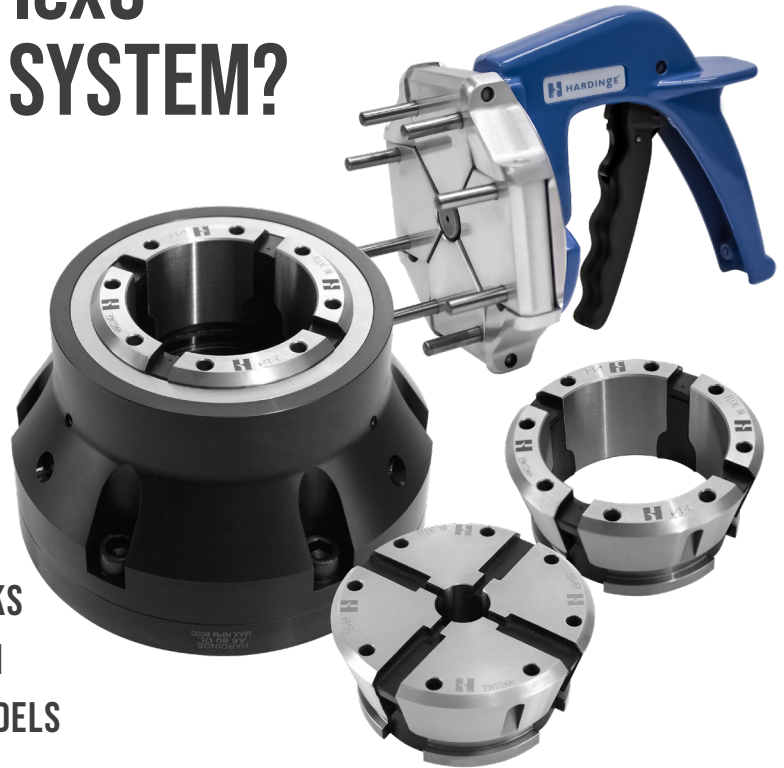
WHY BUY A HARDINGE FlexC QUICK-CHANGE COLLET SYSTEM?

- 10x THE GRIP RANGE OF TRADITIONAL LATHE COLLETS

+/- .020" 42mm, 52mm, 65mm, 80mm collets

+/- .040" 100mm, 120mm, 140mm, 160mm collets

- 2x AS ACCURATE (.0004 TIR)
- TRUE PARALLEL GRIPPING
- UP TO 19x FASTER CHANGEOVER COMPARED TO TRADITIONAL LATHE COLLETS OR 3 JAW CHUCKS
- LIFETIME GUARANTEE ON COLLET VULCANIZATION
- FULLY INTERCHANGEABLE WITH COMPETITOR MODELS



FlexC DESIGN UPGRADES

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.

EXPANDED GRIP RANGE:

+/- .020" on 42mm, 52mm, 65mm, 80mm collets

+/- .040" on 100mm, 120mm, 140mm, 160mm collets



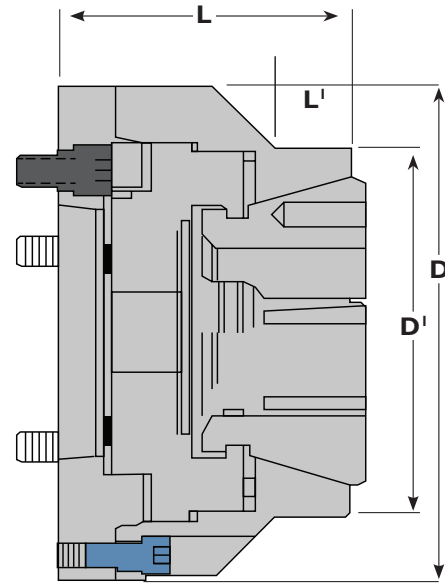
AMERICAN MADE WORKHOLDING

FOR REAL AMERICAN QUALITY & PERFORMANCE



STYLE D

PULL-BACK WITH THRU-HOLE



42 & 65MM SYSTEMS

Size	Spindle Type	Part Number	D' - Diameter	D - Diameter	L' - Length	L - Length
42	A2-5	V42 5D00300	4.016" (102)	5.512" (140)	.846" (21.5)	3.543" (90)
42	A2-6	V42 6D00400	4.016" (102)	6.496" (165)	.846" (21.5)	3.543" (90)
42	140mm	V42 140D01700	4.016" (102)	5.906" (150)	.846" (21.5)	3.528" (89.62)
65	A2-5	V65 5D00550	4.736" (120.3)	6.299" (160)	.907" (23.04)	3.740" (94.996)
65	A2-6	V65 6D00650	4.736" (120.3)	6.299" (160)	.907" (23.04)	3.740" (94.996)
65	A2-8	V65 8D00750	4.736" (120.3)	8.268" (210)	.907" (23.04)	4.240" (107.7)
65	140mm	V65 140D01950	4.736" (120.3)	6.299" (160)	.907" (23.04)	3.788" (96.22)

* Limited to machine capacity. (millimeters in parentheses)



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

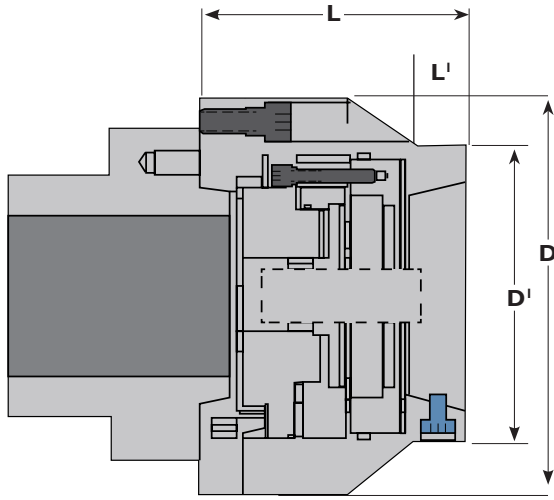
Our fully staffed team of experienced customer service representatives will help you from product identification to shipment.

Accomplished Engineers, averaging over 20 years of service to the industry, making that special application easy for you.

STYLE A

PULL-BACK DESIGN WITH A DEAD-LENGTH® WORKSTOP

All assemblies include a part stop



42 & 65MM SYSTEMS



Dead Stop Included
V42 5A01011 (M12 X 1.75 Thread)
V65 6DL05836 (1"-20 Thread)
V80 6DL06213 (1"-20 Thread)
V100 00007113 (1"-20 Thread)
V120 00002913 (1"-20 Thread)
V140 00004313 (1"-20 Thread)
V160 00005113 (1"-20 Thread)

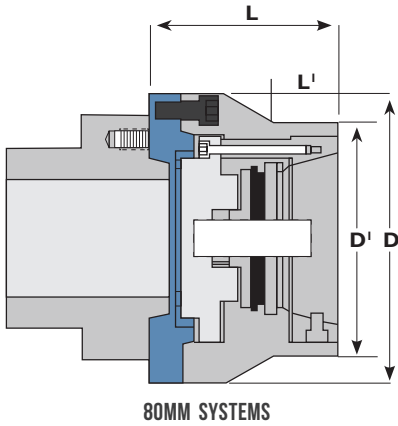
Size	Spindle Type	Part Number	D' - Diameter	D - Diameter	L' - Length	L - Length
42	A2-5	V42 5A01000	4.016" (102)	5.512" (140)	.610" (15.5)	4.764" (121)
42	A2-6	V42 6A01100	4.016" (102)	6.496" (165)	.610" (15.5)	4.764" (121)
42	140mm	V42 140A01600	4.016" (102)	5.906" (150)	.610" (15.5)	4.946" (125.62)
65	A2-5	V65 5A01250	4.736" (120.3)	6.299" (160)	.845" (21.46)	4.942" (125.53)
65	A2-6	V65 6A01350	4.736" (120.3)	6.299" (160)	.845" (21.46)	4.942" (125.53)
65	A2-8	V65 8A01450	4.736" (120.3)	8.268" (210)	.845" (21.46)	5.442" (138.23)
65	140mm	V65 140A02350	4.736" (120.3)	6.299" (160)	.845" (21.46)	4.990" (126.75)
80	A2-5	V80 5A06620	5.750" (146.1)	7.700" (195.6)	1.000" (25.4)	5.174" (131.42)
80	A2-6	V80 6A06420	5.750" (146.1)	7.700" (195.6)	1.000" (25.4)	5.174" (131.4)
80	A2-8	V80 8A06520	5.750" (146.1)	8.250" (209.6)	1.000" (25.4)	5.174" (131.4)
80	140mm	V80 140A06720	5.750" (146.1)	7.700" (195.6)	1.000" (25.4)	5.174" (131.4)
NEW 100	A2-6	V100 6A07600	6.750" (171.45)	9.625" (244.475)	1.074" (27.2796)	6.188" (157.1752)
NEW 100	A2-8	V100 8A07700	6.750" (171.45)	9.625" (244.475)	1.074" (27.2796)	6.188" (157.1752)
NEW 100	A2-11	V100 11A07800	6.750" (171.45)	11.000" (279.4)	1.074" (27.2796)	6.188" (157.1752)
NEW 120	A2-6	V120 6A03300	8.250" (209.55)	11.750" (298.45)	.948" (24.0792)	6.875" (174.625)
NEW 120	A2-8	V120 8A03400	8.250" (209.55)	11.750" (298.45)	.948" (24.0792)	6.875" (174.625)
NEW 120	A2-11	V120 11A03500	8.250" (209.55)	11.750" (298.45)	.948" (24.0792)	7" (177.8)
NEW 140	A2-6	V140 6A04700	9.000" (228.6)	11.750" (298.45)	1.021" (25.9334)	6.875" (174.625)
NEW 140	A2-8	V140 8A04800	9.000" (228.6)	11.750" (298.45)	1.021" (25.9334)	6.875" (174.625)
NEW 140	A2-11	V140 11A04900	9.000" (228.6)	11.750" (298.45)	1.021" (25.9334)	7" (177.8)
NEW 160	A2-6	V160 6A05600	10.000" (254)	12.750" (323.85)	1.021" (25.9334)	6.875" (174.625)
NEW 160	A2-8	V160 8A05800	10.000" (254)	12.750" (323.85)	1.021" (25.9334)	6.875" (174.625)
NEW 160	A2-11	V160 11A06800	10.000" (254)	12.750" (323.85)	1.021" (25.9334)	7" (177.8)

* Limited to machine capacity. (millimeters in parentheses)

STYLE DL

PUSH-TO-CLOSE DESIGN WITH A DEAD-LENGTH® WORKSTOP

All assemblies include a part stop



Dead Stop Included
V42 5DL05411 (M12 X 1.75)
V65 6DL05836 (1"-20 assembly)
V80 6DL06213 (1"-20 assembly)
V120 00002913 (1"-20 Thread)
V140 00004313 (1"-20 Thread)
V160 00005113 (1"-20 Thread)

Size	Spindle Type	Part Number	D' - Dia.	D - Dia.	L' - Length	L - Length
42	A2-5	V42 5DL05400	—	5.315" (135)	—	4.724" (120)
42	A2-6	V42 6DL05500	5.315" (135)	6.299" (160)	2.953" (75)	4.724" (120)
42	140mm	V42 140DL04400	5.315" (135)	5.906 (150)	3.944 (100)	4.724" (120)
65	A2-5	V65 5DL05750	5.404" (137.3)	6.299" (160)	1.292" (32.82)	4.845" (123)
65	A2-6	V65 6DL05950	5.404" (137.3)	6.299" (160)	1.292" (32.82)	4.845" (123)
65	A2-8	V65 8DL06050	5.404" (137.3)	8.268" (210)	1.292" (32.82)	5.345" (135.8)
65	140mm	V65 140DL02450	5.404" (137.3)	6.299" (160)	1.292" (32.82)	4.893" (124.3)
80	A2-5	V80 5DL06120	6.200" (157.5)	7.700" (195.6)	1.584" (40.2)	5.003" (127.08)
80	A2-6	V80 6DL06220	6.200" (157.5)	7.700" (195.6)	1.584" (40.2)	5.003" (127.08)
80	A2-8	V80 8DL06320	6.200" (157.5)	8.250" (209.6)	1.584" (40.2)	5.003" (127.08)
80	140mm	V80 140DL06420	6.200" (157.5)	7.700" (195.6)	1.584" (40.2)	5.224" (132.7)
100	A2-6	V100 6DL07100	7.200" (182.88)	9.625" (244.48)	1.934" (49.13)	6.125" (155.58)
100	A2-8	V100 8DL07200	7.200" (182.88)	9.625" (244.48)	1.934" (49.13)	6.125" (155.58)
100	A2-11	V100 11DL07300	7.200" (182.88)	11.000" (279.4)	1.934" (49.13)	6.125" (155.58)
120	A2-6	V120 6DL02900	8.875" (225.425)	11.750" (298.45)	1.959" (49.7586)	6.875" (174.625)
120	A2-8	V120 8DL03100	8.875" (225.425)	11.750" (298.45)	1.959" (49.7586)	6.875" (174.625)
120	A2-11	V120 11DL03200	8.750" (222.25)	11.750" (298.45)	1.959" (49.7586)	7" (177.8)
140	A2-6	V140 6DL04300	9.625" (244.475)	11.750" (298.45)	2.334" (59.2836)	6.875" (174.625)
140	A2-8	V140 8DL04500	9.625" (244.475)	11.750" (298.45)	2.334" (59.2836)	6.875" (174.625)
140	A2-11	V140 11DL04600	9.625" (244.475)	11.750" (298.45)	2.334" (59.2836)	7" (177.8)
160	A2-6	V160 6DL05100	10.625" (269.875)	12.750" (323.85)	2.334" (59.2836)	6.875" (174.625)
160	A2-8	V160 8DL05200	10.625" (269.875)	12.750" (323.85)	2.334" (59.2836)	6.875" (174.625)
160	A2-11	V160 11DL05300	10.625" (269.875)	12.750" (323.85)	2.334" (59.2836)	7" (177.8)

* Limited to machine capacity. (millimeters in parentheses)

FlexC COLLETS

CUSTOM MANUFACTURING

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

**LIFETIME GUARANTEE
ON COLLET VULCANIZATION**



	Size	Rated Capacity	Round Smooth/ Serrated	Hexagon Smooth/ Serrated	Square Smooth
NEW	32mm	fractional	$\frac{5}{32}$ " - $1\frac{1}{4}$ "	$\frac{9}{32}$ " - $1\frac{1}{16}$ "	$\frac{9}{32}$ " - $\frac{7}{8}$ "
		metric	4mm - 32mm	7mm - 27mm	7mm - 22.5mm
	42mm	fractional	$\frac{7}{32}$ " - $1\frac{5}{8}$ "	$\frac{5}{16}$ " - $1\frac{3}{8}$ "	$\frac{5}{16}$ " - $1\frac{9}{64}$ "
		metric	5mm - 42mm	8mm - 36mm	8mm - 29mm
NEW	52mm	fractional	$\frac{5}{32}$ " - $2\frac{3}{4}$ "	$\frac{9}{32}$ " - $1\frac{49}{64}$ "	$\frac{9}{32}$ " - $1\frac{27}{64}$ "
		metric	4mm - 52mm	7mm - 45mm	7mm - 36mm
	65mm	fractional	$\frac{1}{4}$ " - $2\frac{9}{16}$ "	$\frac{5}{16}$ " - $2\frac{1}{8}$ "	$\frac{5}{16}$ " - $1\frac{13}{16}$ "
		metric	5mm - 65mm	8mm - 56mm	8mm - 46mm
	80mm	fractional	$\frac{15}{32}$ " - $3\frac{1}{4}$ "	$\frac{15}{32}$ " - $2\frac{3}{4}$ "	$\frac{15}{32}$ " - $2\frac{1}{4}$ "
		metric	12mm - 82.5mm	12mm - 69.9mm	12mm - 57.2mm
NEW	100mm	fractional	$\frac{5}{8}$ " - 4"	$\frac{5}{8}$ " - $3\frac{3}{8}$ "	$\frac{5}{8}$ " - $2\frac{3}{4}$ "
		metric	16mm - 100mm	16mm - 86mm	16mm - 70mm
NEW	120mm	fractional	1" - $4\frac{23}{32}$ "	1" - $4\frac{3}{32}$ "	1" - $3\frac{11}{32}$ "
		metric	25mm - 120mm	25mm - 103.9mm	25mm - 84.8mm
NEW	140mm	fractional	1" - $5\frac{1}{2}$ "	1" - $4\frac{3}{4}$ "	1" - $3\frac{7}{8}$ "
		metric	25mm - 140mm	25mm - 121mm	25mm - 99mm
NEW	160mm	fractional	$1\frac{1}{16}$ " - $6\frac{5}{16}$ "	$1\frac{1}{16}$ " - $5\frac{59}{64}$ "	$1\frac{1}{16}$ " - $4\frac{17}{32}$ "
		metric	27mm - 160mm	27mm - 137mm	27mm - 115.4mm

EMERGENCY COLLETS

	Size	Size / Pilot Hole	Part Number	Boring Ring
NEW	32mm	5mm	C0320000000005	C0320000000RING
		16mm	C03200000000016	
	42mm	5mm Pilot	C04200000000005	C0420000000RING
		15mm Pilot	C04200000000015	
		30mm Pilot	C04200000000030	
NEW	52mm	5mm	C05200000000005	C0520000000RING
		20mm	C05200000000020	
		35mm	C05200000000035	
	65mm	8mm Pilot	C06500000000008	C0650000000RING
		20mm Pilot	C06500000000020	
		40mm Pilot	C06500000000040	
	80mm	12mm Pilot	C08000000000012	C0800000000RING
		25mm Pilot	C08000000000025	
		40mm Pilot	C08000000000040	
NEW	100mm	16mm Pilot	C10000000000016	C1000000000RING
		30mm Pilot	C10000000000030	
		45mm Pilot	C10000000000045	
		60mm Pilot	C10000000000060	
		75mm Pilot	C10000000000075	



FlexC 100 Emergency Collet Head



FlexC 100 Boring Ring

NEW	120mm	25mm Pilot	C12000000000025	C1200000000RING
NEW	140mm	25mm Pilot	C14000000000025	C1400000000RING
NEW	160mm	27mm Pilot	C16000000000027	C1600000000RING

FlexC ACCESSORIES

CHANGING WRENCHES

Change collets in seconds. Pins on the changing wrench insert into the corresponding holes in the face of the collet. The wrench compresses the collet for quick and easy removal and replacement.

MANUAL WRENCHES

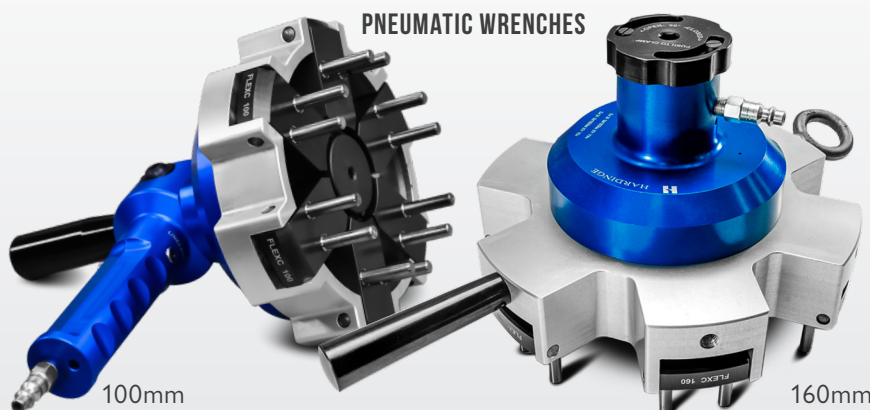


42mm

65mm

80mm

PNEUMATIC WRENCHES



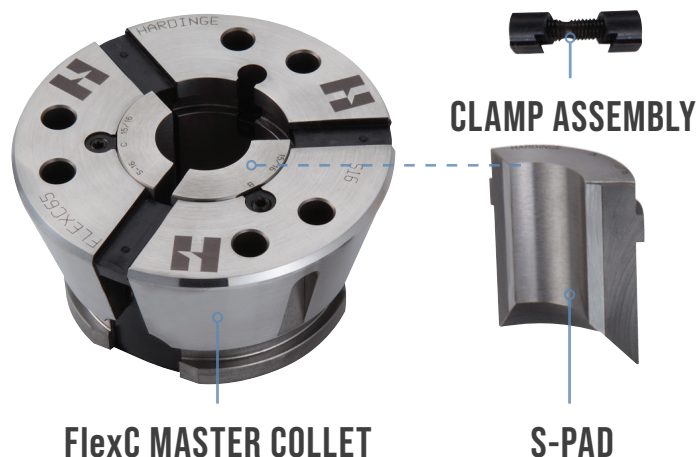
100mm

160mm

	FlexC Size	Part Number	Wrench Type
NEW	32mm	C032000000WREN	MANUAL
	42mm	C042000000WREN	MANUAL
NEW	52mm	C052000000WREN	MANUAL
	65mm	C065000000WREN	MANUAL
	80mm	C080000000WREN	MANUAL
NEW	100mm	C10000AIRWRENCH	PNEUMATIC
NEW	120mm	C12000AIRWRENCH	PNEUMATIC
NEW	140mm	C14000AIRWRENCH	PNEUMATIC
NEW	160mm	C16000AIRWRENCH	PNEUMATIC

MASTER COLLET & PADS

Utilize your existing supply of S pads with this innovative FlexC master collet. There are no set screws or clamps to be damaged or loosened. When a part is machined, the working forces are against the rear shoulder of the pad which is located against the rear shoulder of the groove in the master collet.



FlexC MASTER COLLET

S-PAD

S16, S20 and S26	Part Number
B Clamp Assembly	76190000000000
B Wrench	76370000000000
S22 and S30	Part Number
C Clamp Assembly	76270000000000
C Wrench	76390000000000

Size	Master Collet Part Number	S-Pad Type
65mm	C0650S16MASTER	S16
	C0650S20MASTER	S20
	C0650S22MASTER	S22
80mm	C0800S26MASTER	S26
	C0800S30MASTER	S30

Part Number	Round Capacity, Min-Max	S-Pad Type
5607-	1/8" (3.17) - 1 5/8" (41.28)	S16
5609-	1/8" (3.17) - 2" (50.80)	S20
5611-	1/8" (3.17) - 2 1/4" (57.15)	S22
5613-	1/8" (3.17) - 2 5/8" (66.68)	S26
5615-	1/8" (3.17) - 3" (76.20)	S30

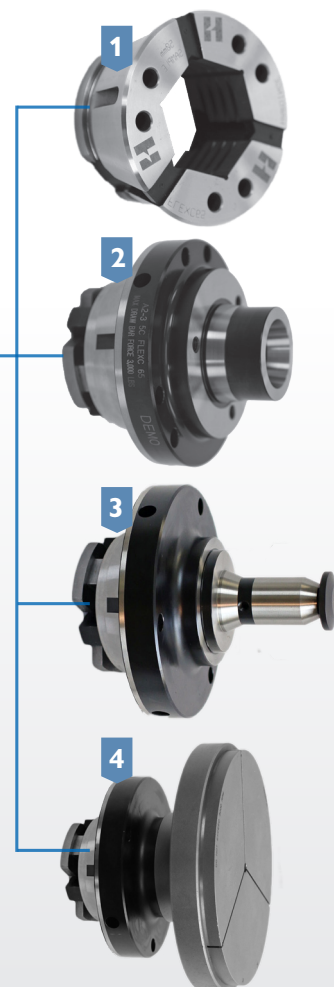
GET THE MOST OUT OF YOUR INVESTMENT

FlexC 65 & 80 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:

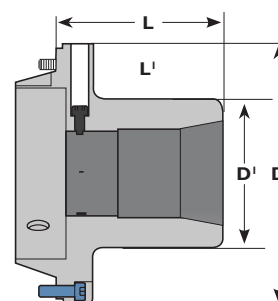
- 1 FlexC QUICK CHANGE COLLETS
- 2 5C/16C COLLET ADAPTER
- 3 SURE-GRIP EXPANDING COLLETS
- 4 5C/16C STEP CHUCKS & CLOSERS

Note: Adapters are not Thru hole compatible

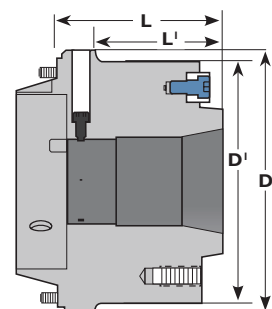


COLLET ADAPTERS 5C/16C COLLET ADAPTERS

Hardinge's 5C/16C Spindle tooling has been an industry standard for over 100 years. Customers can now utilize their 5C/16C spindle tooling in our FlexC 65 & 80 system for applications that are ideally suited for these style collets. Examples include extended nose, small hole, special shapes, Internal Gripping and more!



V80 16C01020S
V65 5C01010S

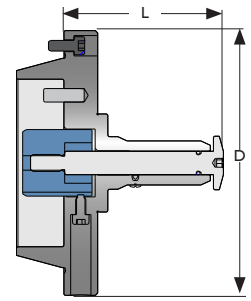


V80 16C01010S
USED WITH 16C STEP CHUCKS

Item	Part Number	D' -Diameter	D-Diameter	L'-Length	L-Length
5C Collet Adapter	V65 5C01010S	1.984" (50.39)	4.891" (124.23)	1.25" (31.75)	2.5625" (65.09)
16C Plain Nose Collet Adapter	V80 16C01020S	3.25" (82.55)	5.688" (144.47)	2.812" (71.42)	3.625" (92.07)
16C A2-5 Collet Adapter	V80 16C01010S	5.25" (133.36)	5.688" (144.47)	2.812" (71.42)	3.625" (92.07)

STANDARD SURE-GRIP EXPANDING ADAPTERS

You can now utilize Hardinge's Sure-Grip expanding system in our FlexC 65 & 80 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.



SURE-GRIP EXPANDING COLLET

Size	Part Number*	Grip Range	D - Diameter	L - Length	Collet	Work Stop
65	V65 2001000	1/2" - 3/4"	4.891" (124.23)	2.087" (53.01)	18350019-	18750000000200
65	V65 2501000	3/4" - 1"	4.891" (124.23)	2.483" (63.07)	18610019-	18750000000250
65	V65 3001000	1" - 1 1/2"	4.891" (124.23)	2.947" (74.85)	18370019-	18750000000300
65	V65 4001000	1 1/2" - 2 1/4"	5.25" (133.35)	3.536" (89.81)	18390019-	18550000000400
65	V65 5001000	2 1/4" - 3"	5.25" (133.35)	4.274" (108.56)	18410019-	18550000000500
65	V65 6001000	3" - 4"	5.25" (133.35)	4.337" (110.16)	18430019-	18550000000600
80	V80 3001000	1" - 1 1/2"	5.68" (144.47)	3.198" (81.23)	18370019-	18550000000300
80	V80 4001000	1 1/2" - 2 1/4"	5.68" (144.47)	3.629" (92.17)	18380019-	18550000000400
80	V80 5001000	2 1/4" - 3"	5.68" (144.47)	4.368" (110.95)	18410019-	18550000000500
80	V80 6001000	3" - 4"	5.68" (144.47)	4.430" (112.52)	18430019-	18550000000600

* Requires part number V65 5C01000 or V80 16C01000 for use.

STANDARD 5C/16C STEP CHUCKS & A2-5 CLOSERS

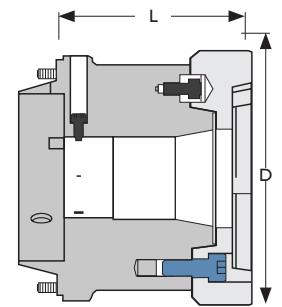
REGULAR DEPTH

Size	Part Number **	Closure Size	D - Diameter	L - Length
65	V65 235C2RD	2"	3.625" (92.08)	3.0623" (77.8)
65	V65 235C3RD	3"	3.75" (95.25)	3.0623" (77.8)
65	V65 235C4RD	4"	4.75" (120.65)	3.0623" (77.8)
65	V65 235C5RD	5"	5.75" (146.05)	3.0623" (77.8)
65	V65 235C6RD	6"	6.75" (171.45)	3.0623" (77.8)
80	16 0002682	2"	5.50" (139.7)	4.50" (114.3)
80	16 0002683	3"	5.50" (139.7)	4.50" (114.3)
80	16 0002684	4"	5.795" (147.23)	4.50" (114.3)
80	16 0002685	5"	5.795" (147.23)	4.50" (114.3)
80	16 0002686	6"	5.795" (147.23)	4.50" (114.3)

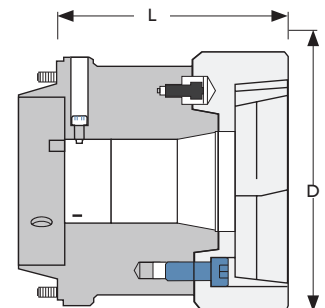
EXTRA DEPTH

Size	Part Number **	Closure Size	D - Diameter	L - Length
65	V65 235C2ED	2"	3.625" (92.08)	3.813" (96.85)
65	V65 235C3ED	3"	4.25" (107.95)	3.813" (96.85)
65	V65 235C4ED	4"	5.25" (133.35)	3.813" (96.85)
65	V65 235C5ED	5"	6.25" (158.75)	3.813" (96.85)
65	V65 235C6ED	6"	7.25" (184.15)	3.813" (96.85)
80	16 0002682OC	2"	5.50" (139.7)	5.25" (133.35)
80	16 0002683OC	3"	5.50" (139.7)	5.25" (133.35)
80	16 0002684OC	4"	5.875" (149.23)	5.25" (133.35)
80	16 0002685OC	5"	6.25" (158.75)	5.25" (133.35)
80	16 0002686OC	6"	7.25" (184.15)	5.25" (133.35)

** Requires part number V65 5C01010S or V80 16C01010S for use.



**A2-5 16C ADAPTER
WITH 4 CLOSER**



**A2-5 16C ADAPTER
WITH 4 ED CLOSER**

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
105700000042A	42A
105700000042DL	42DL
327300000065DL	65A & DL
327300000080DL	80A & DL

A= Pull back w/ stop; DL = Dead Length



VARIABLE SPEED PART EJECTORS WITH PART STOP

The Hardinge JL-Series Variable Speed Part Ejector is used when maximum stroke and flexibility is needed. These part ejectors will give you either 2.5" (Short) or 4.4" (Long) 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	Stroke Length
JLS000200065DL	65A & DL	2.5" - Short
JL 000100065DL	65A & DL	4.4" - Long
JLS000200080DL	80A & DL	2.5" - Short
JL 000100080DL	80A & DL	4.4" - Long
JLS0002000100	100A & DL	2.5" - Short

A = Pull back w/ dead length stop; DL = Dead Length



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
V42 5A01011	42A
V42 5DL05411	42DL
V65 6DL05836	65A & DL
V80 6DL06213	80A & DL
NEW V100 00007113	100A & DL
NEW V120 00002913	120A & DL
NEW V140 00004313	140A & DL
NEW V160 00005113	160A & DL

A = Pull back w/ dead length stop; DL = Dead Length



FlexC INSTALLATION RINGS

FlexC Installation Rings are designed to hold onto your 100, 120, 140 or 160mm chuck when mounting to the spindle. This provides an ergonomic cradle allowing the user to rotate the chuck for easy alignment of the mounting bolts. The Installation Ring is secured to the Flex C chuck with three 10M bolts. After securing the chuck to the spindle the Installation Ring and bolts must be removed

	Size	Part Number	Compatable Chucks
NEW	100	V100 00007115	100A, 100DL
NEW	120/140	V120 00002915	120A, 120DL, 140A, 140DL
NEW	160	V160 00005115	160A, 160DL



FlexC COLLET BLOCKS

FlexC Collet Blocks are ideal for either horizontal or vertical machining center applications. The manual hydraulic collet block was added for 5th axis applications. The pullback design maintains a threaded thru hole base to accept a work stop. Maximum working pressure of 65 PSI provides the same superior clamping force to insure part rigidity. The versatility to use 5C/16C collets, step chucks with closers and ID mandrels is an added bonus.

	Collet Type	Part Number	Actuation
	65	7799000065MHYD	MANUAL
	80	7799000080MHYD	MANUAL
	42	77990000420020	HYDRAULIC
	65	77990000650020	HYDRAULIC
NEW	80	77990000800020	HYDRAULIC
NEW	100	77990001000020	HYDRAULIC



CUSTOM FlexC SOLUTIONS

With over 130 years of manufacturing experience, Hardinge is your destination for Custom Application Solutions. Introducing FlexC custom solutions to remedy your productivity inefficiencies or simply to find an answer for those pesky, non-standard parts. Over the next several pages you'll see examples of FlexC custom solutions that may remedy your related problems. Our experienced Design and Applications Engineers will work closely with you to solve your individual needs while working within your parameters.

**CALL TO DISCUSS YOUR SOLUTIONS
ON THE FOLLOWING APPLICATIONS
OR ANY SPECIAL REQUESTS.**

- **FlexC COLLET SPECIAL SHAPES AND SERRATIONS**
- **ECCENTRIC ORDER HOLES**
- **STEPPED HOLES**
- **AIR/COOLANT BLAST**
- **AUTOMATION APPLICATIONS**
- **MILLING APPLICATIONS**



FlexC CUSTOM COLLETS

Custom FlexC collets are some of the most innovative designs on the market. Our in-house engineering team has completed over 250,000 unique collet designs. Applications include off center eccentric order holes, non-marking, special shapes, custom serrations, synchronized collets, stepped single and multi-stepped hole.



FlexC AUTOMATION APPLICATIONS

AIR/COOLANT BLAST APPLICATIONS

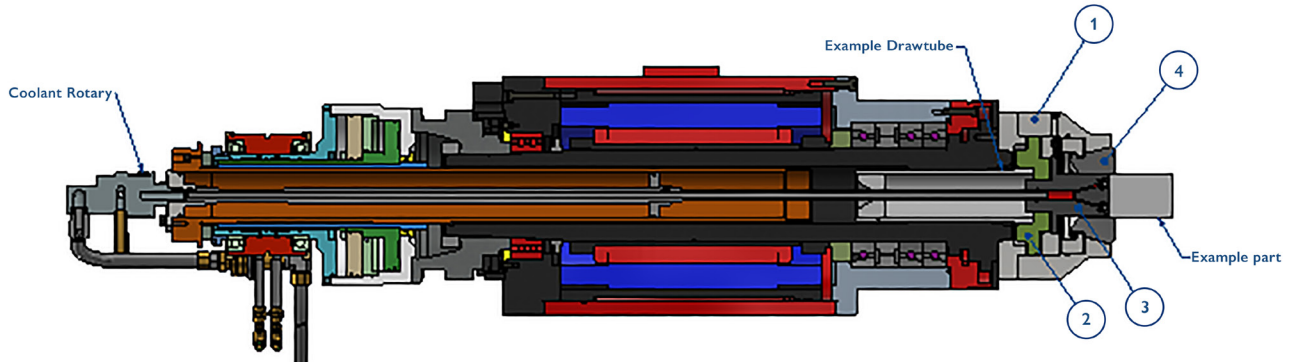
KEY FEATURES

- Internal work stops available with single port which can be machined to size by customer.
- Hardinge can design versions for more complex solutions
- Standard design is for 12mm air tube. Hardinge can customize for various port sizes

Air or Coolant blast are useful options for automated machining operations. For example it can be used to clean chips out of the part and chuck after each cycle, ensuring the locator and chuck are free of chips to accept the next part.

Alternately, this feature may be used to provide additional coolant to the cutting area when boring ID bores.

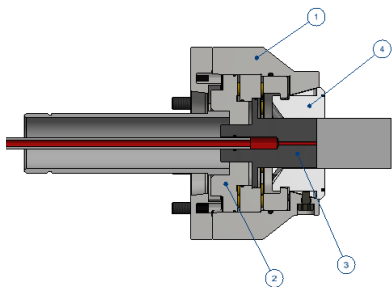
Hardinge offers internal part stop accessories for all sizes of FlexC chucks. The standard type is a multi-ported part stop, for providing multiple jets of air or coolant to clean out the chuck. Combined with the associated "Kit" that includes the rotating union and feed tube this system can be easily set up on your machine spindle.



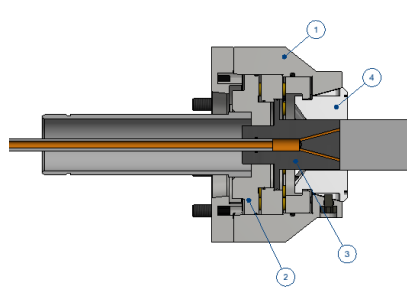
FlexC COOLANT/BLAST AIR COMPONENTS

1. FlexC "A" & "DL" Style Chuck (A2-5, A2-6, A2-8, A2-11)
2. FlexC DrawBar Adapter
3. FlexC Part Stop for Air Sensing
4. FlexC Quick Change Head

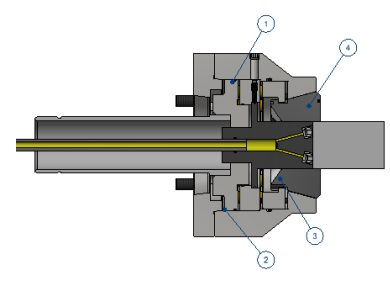
Part Stop with Single Air/Coolant Port



Part Stop with Multiple Air Ports



Part Stop with Multiple Coolant Nozzles



CALL US TODAY FOR A QUOTE 800-843-8801

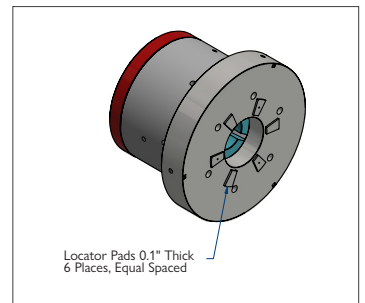
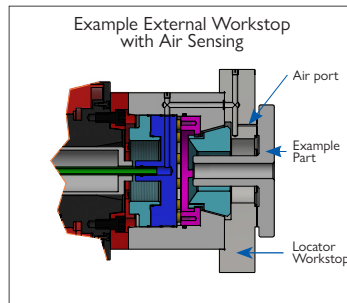
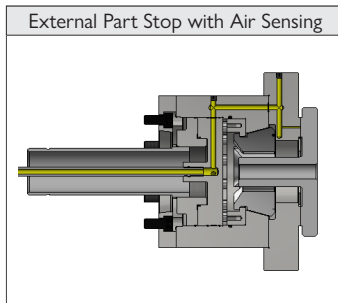
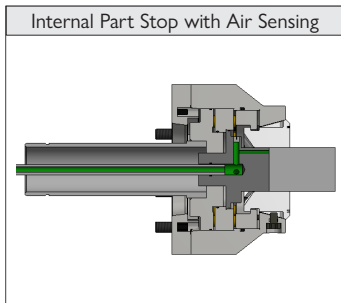
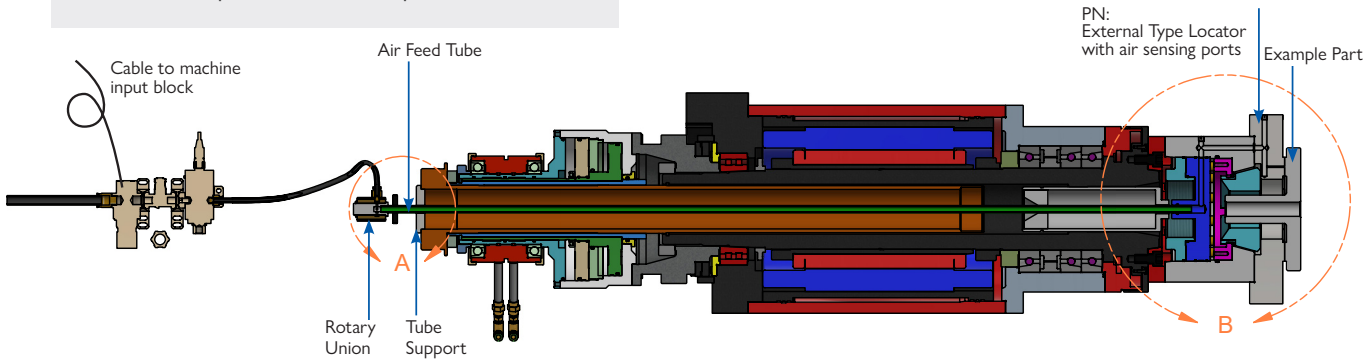
Contact Hardinge for more information on all our Workholding Solutions

PRESENCE SENSING VIA LOW PRESSURE AIR

KEY FEATURES

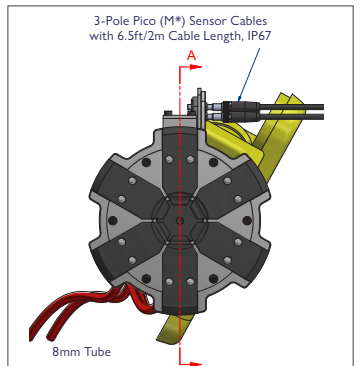
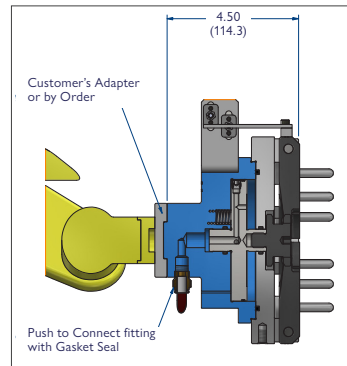
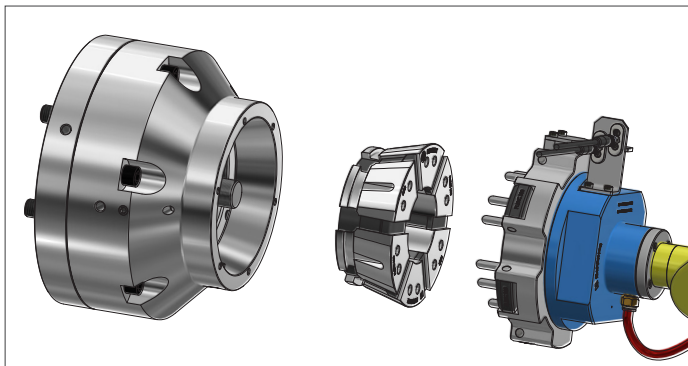
- Internal Air Sensing work stops available with single port which can be machined to size by customer
- External Air Sensing work stops available which can be custom machined by customer
- Hardinge can design special Air Sensing Work Stops for more complex solutions

Part Presence sensing via low pressure air (a.k.a. 'AIR SENSING') is highly useful in automated part loading/unloading machining operations to ensure the part is properly loaded and square to the work stop before a signal is sent from the air catch sensor to the machine control indicating it is OK to begin the machining cycle. This prevents the machine cycle from starting with a potentially mis-loaded part, preventing the production of scrap pieces or worse, machine crashes which can damage tooling or the machine itself.

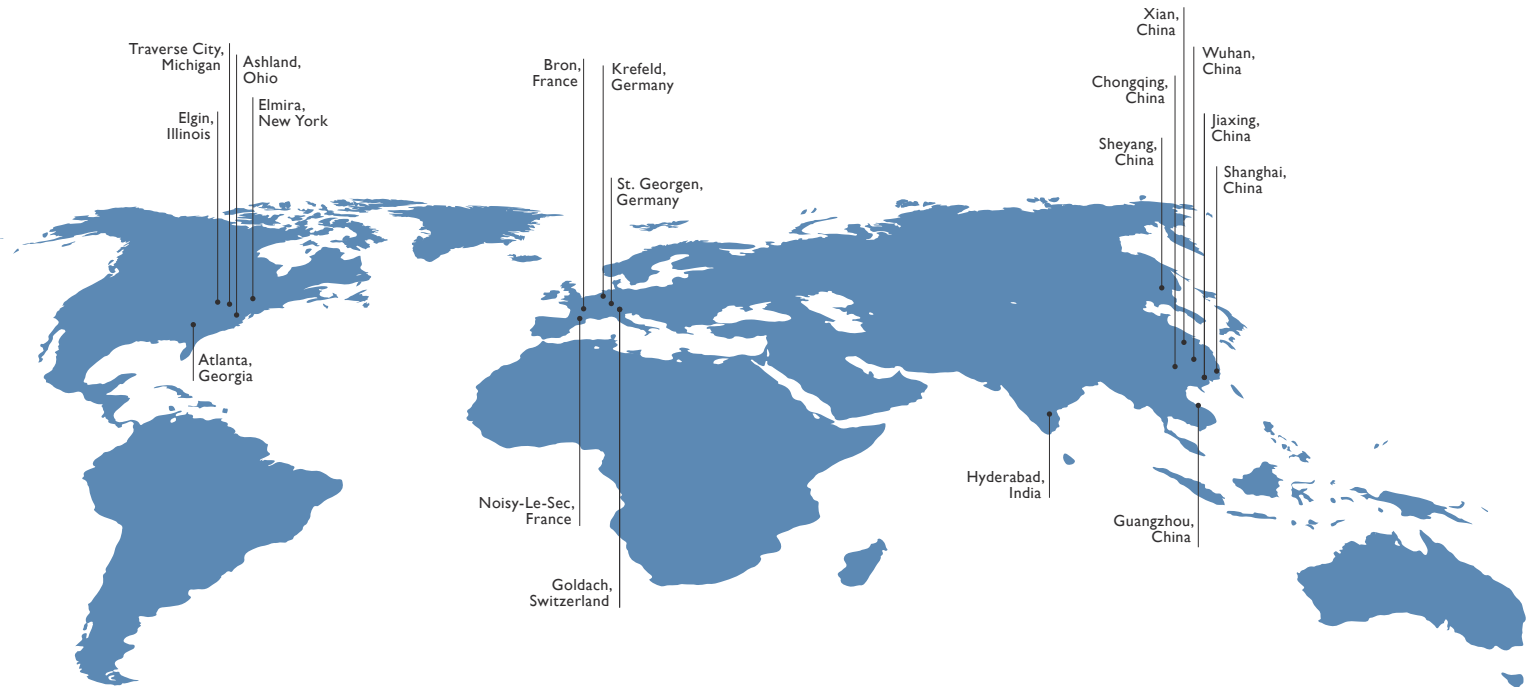


AUTOMATIC CLAMPING HEAD CHANGE OVER

This unique application allows you to autonomously exchange collet heads in a machine without an operator present. We can adapt this wrench to your current robotic arm or implement an entire new system.



HARDINGE WORLDWIDE



Hardinge is a leading international provider of advanced metal-cutting solutions. We provide a full spectrum of highly reliable CNC turning, grinding, and honing machines as well as technologically advanced workholding accessories.

The diverse products we offer enable us to support a variety of market applications in industries including aerospace, agricultural, automotive, construction, consumer products, defense, energy, medical, technology, transportation and more.

We've developed a strong global presence with manufacturing operations in North America, Europe, and Asia. Hardinge applies its engineering and applications expertise to provide your company with the right machine tool solution and support every time.

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