

Quick Change Series Power Collet Chuck for Bar Machining

Two Different Systems:

Direct Mount System

- This system mounts directly to the lathe spindle to ensure a consistent mounting without the need for correction.
- Klamp QDCRL collet chucks are suitable for spring, varibore and rubberflex collets increasing its flexibility. Varibore and rubberflex collets allow rough, unfinished bar to be machined in the first operation and spring collets can be used for high accuracy in the second operation.
- Workpiece remains in a fixed position during actuation allowing for precise z-axis positioning. A tapered sleeve is pushed forward, compressing the collet and gripping the workpiece.
- All Klamp collet chucks are case hardened, optimising the rigidity, strength and durability.



Modular System

- As the direct mount system except with interchangeable adaptors enables the collet chuck to be moved from one machine spindle nose to another
- Cost-effective as only additional adaptors and connectors are required when changing different spindle/machine.
- The need for adjustment is minimal, meaning less machine downtime.



Ultra-Fast 10 Second Collet Changes



3 Different Collet Types Available



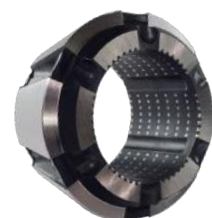
Spring Collets*

Suited for second operation work, collets are size matched according to gripped diameters, enabling you to have a high gripping accuracy. Collets can be supplied as smooth or serrated as required.



Varibore Collets**

Ideal for first operation work as they have a 2-3mm gripping range enabling you to handle rough bar. Supplied either as smooth, serrated or super grip.



Rubberflex Collets***

The same accuracy specification as spring collets. Elastic rubber-metal vulcanization allows a clamping range of +/- 1mm to the nominal diameter.

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Bar Seals Prevent Swarf & Coolant Ingress



Remove bar seal from housing



Mark the diameter you require



Cut out the diameter



Reassemble and proceed

Adjustable Collet Mounted Workstop for Spring Collets



- Easy to use, installation time – less than one minute
- Available for D173E (Part No: **WS-D173E**) and D185E (Part No: **WS-D185E**) spring collet types
- Suitable for round, square and hexagon spring collets
- No deformation of collet shank
- No influence on clamping characteristics of collet or collet chuck



Insert collet work stopper



Lock stopper housing in position



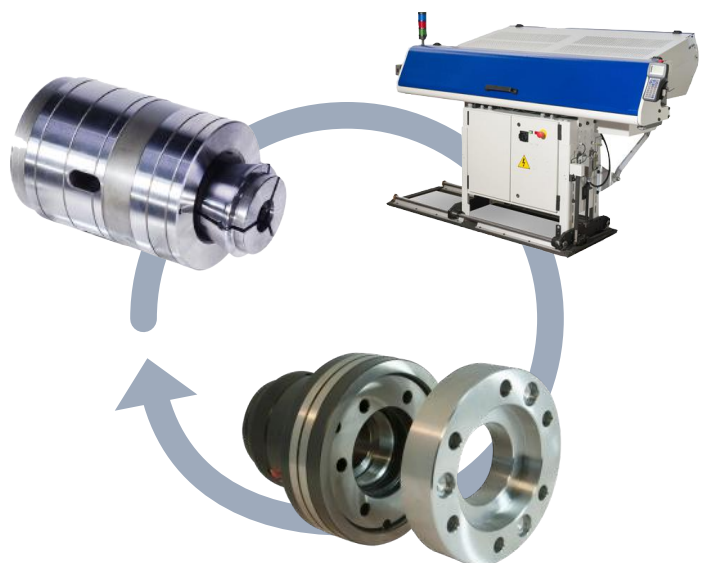
Adjust stopper shaft position



Lock stopper shaft and install

Application Advantages

- Klamp collet chucks are designed to work with bar loaders and bar feeders by not interfering with the actions of the bar feeder or loader.
- All types of QCRL42, QCRL60 & QCRL80 have interchangeable match ground reduction sleeves to allow you to use a wider range of collets on one chuck.
- Wide adaptor plates for all models available upon request.
- Clamping/unclamping of chuck during spindle rotation is possible.
- Less deformation of thin-walled components during clamping.
- High operating reliability due to a minimum number of parts.
- High axial positioning accuracy of the components by means of push type collet system.

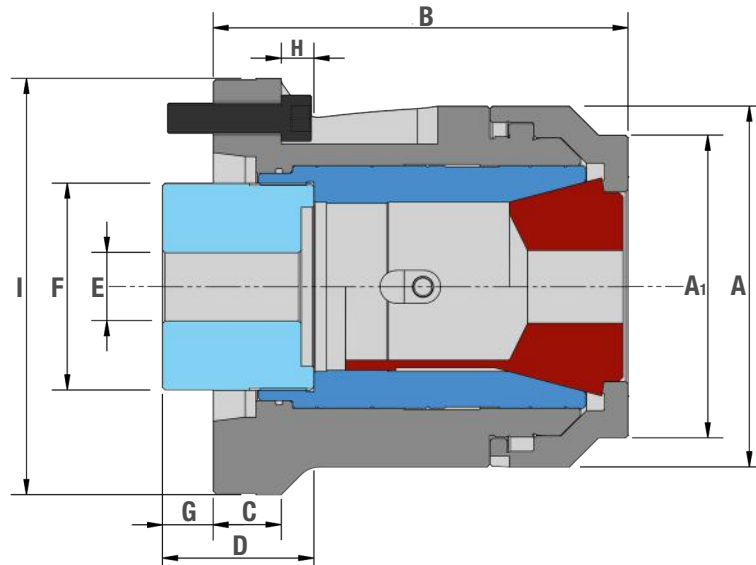


* See pages 14-18 for more Spring Collet information.

** See pages 22-23 for more Varibore Collet information.

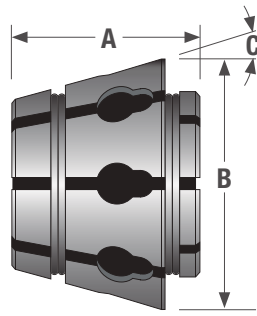
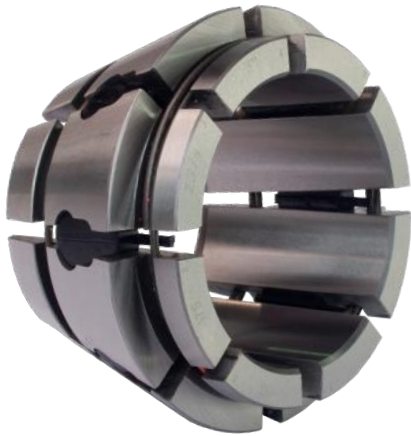
*** DRFC673 Rubber-flex collets are only suitable for the CRL42 Collet chuck and are available in smooth and full grip versions (smooth version is only available for 11mm diameters and smaller). DRFC677 Rubber-flex collets are only suitable for the CRL60 Collet chuck and are available in smooth and full grip versions (smooth version is only available for 61mm diameters and larger). See pages 24-25 for more information.

Quick Change Series Power Collet Chuck for Bar Machining



KLAMP Type	QDCRL42 DIN	QDCRL60 DIN	QCRS66 Inch		QCRS80 Inch		QCRL80 DIN		
Mounting	A5	A6	Z220	A8	Z220	A8	Z220	A8	
Part Number	QDCRL42A5	QDCRL60A6	QCRS66	QCRS66A8	QCRS80	QCRS80A8	QCRL80	QCRL80A8	
Spring Collet Type	D-173E	D-185E	-	-	-	-	D-193E		
Spring Collet Gripping Range	Minimum	2	3	-	-	-	12		
	Maximum	42	60	-	-	-	80		
Spring Collet Increments	0.5	0.5	-	-	-	-	0.5		
Varibore Collet Type	D-673	D-677	D-285		D-175		D-660		
Varibore Collet Gripping Range	Minimum	4	4	3	12		12		
	Maximum	42	60	66	80		80		
Varibore Collet Increments	2	2	3	3	3		3		
Rubberflex Collet Type	DRFC-673	DRFC-677	-	-	-	-	-		
Rubberflex Collet Gripping Range	Minimum	7*	19*	-	-	-	-		
	Maximum	45*	65*	-	-	-	-		
Rubberflex Collet Increments	2	2	-	-	-	-	-		
A	113	143	162		196		196		
A1	93	120	136		166		166		
B	136	164.5	146		164.5	162	216	209	
C	N / A	N / A	N / A		N / A		N / A		
D	60	60	80		80		80		
E Maximum	M58 x 2.0	M75 x 2.0	M90 x 2.0		M90 x 2.0		M90 x 2.0		
F	65	82	100		100		100		
G Maximum	23	20	5	25	37	20	33	16	
G Minimum	16	13	-5	15	25	8	25	8	
H	N / A	N / A	N / A		N / A		N / A		
I	135		230	220	230	220	230	220	
Sleeve stroke	7	7	10		12		8		
Max. input force	kN	25	30	38	45		45		
Max. Gripping Force	kN	55	60	84	78		78		
Max. Speed	min-1	7100	6300	4500	4500		4500		
Net Weight	kg	10	17	23.3	21.5	28.3	28.5	37	36
Matching Kitagawa Cylinders	S1246 SS1246	S1552 S1875	S1552 S1875		S2091 SS1881		S2091 SS1881		

Varibore Collets for CRS54, QCRL54, CRS66, QCRS66, QCRL66 & QCRS80 Collet Chucks



Varibore Collets

- Round, Hexagon or Square
- Specify which gripping surface you require – Supergrip Serrations (Heavy duty), Annular Serrations or Smooth
- Other shapes available upon request

Dimensions (Metric)

Part No.	A	B	C
D120	62.7	88	15°
D285	73.2	99.3	15°
D175	80	120	15°

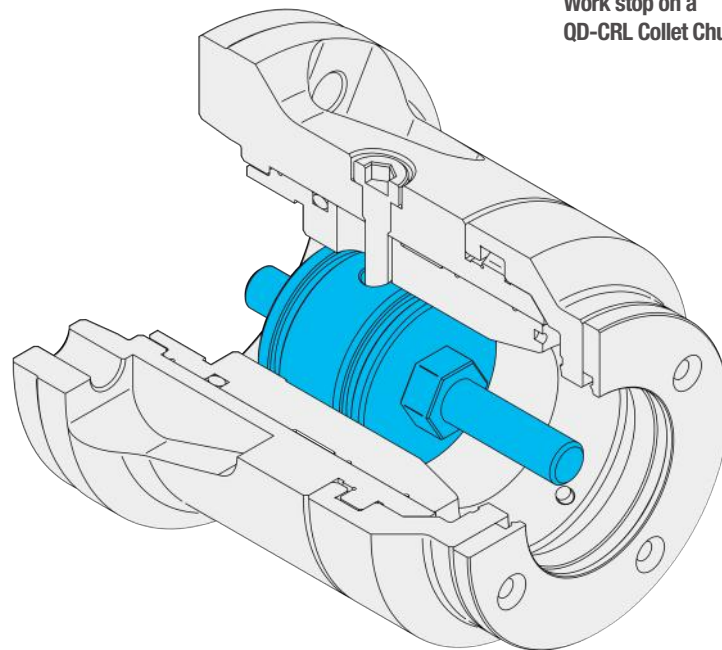
Gripping Range		D120 for CRS54 & QCRL54			D285 for CRS66, QCRS66 & QCRL66			D175 for QCRS80		
Inch	mm	Round	Hexagon	Square	Round	Hexagon	Square	Round	Hexagon	Square
1/16 - 3/16	1.58 - 4.76	D120R-D01	-	-	-	-	-	-	-	-
1/8 - 1/4	3.17 - 6.35	D120R-D02	D120X-D69	D120S-D87	D285R-E02	D285X-E69	D285S-E87	-	-	-
1/4 - 3/8	6.35 - 9.52	D120R-D03	D120X-D70	D120S-D88	D285R-E03	D285X-E70	D285S-E88	-	-	-
3/8 - 1/2	9.52 - 12.70	D120R-D04	D120X-D71	D120S-D89	D285R-E04	D285X-E71	D285S-E89	-	-	-
1/2 - 5/8	12.70 - 15.87	D120R-D05	D120X-D72	D120S-D90	D285R-E05	D285X-E72	D285S-E90	D175R-F05	D175X-F72	D175S-F100
5/8 - 3/4	15.87 - 19.05	D120R-D06	D120X-D73	D120S-D91	D285R-E06	D285X-E73	D285S-E91	D175R-F06	D175X-F73	D175S-F101
3/4 - 7/8	19.05 - 22.22	D120R-D07	D120X-D74	D120S-D92	D285R-E07	D285X-E74	D285S-E92	D175R-F07	D175X-F74	D175S-F102
7/8 - 1	22.22 - 25.40	D120R-D08	D120X-D75	D120S-D93	D285R-E08	D285X-E75	D285S-E93	D175R-F08	D175X-F75	D175S-F103
1 - 1.1/8	25.40 - 28.57	D120R-D09	D120X-D76	D120S-D94	D285R-E09	D285X-E76	D285S-E94	D175R-F09	D175X-F76	D175S-F104
1.1/8 - 1.1/4	28.57 - 31.75	D120R-D10	D120X-D77	D120S-D95	D285R-E10	D285X-E77	D285S-E95	D175R-F10	D175X-F77	D175S-F105
1.1/4 - 1.3/8	31.75 - 34.92	D120R-D11	D120X-D78	D120S-D96	D285R-E11	D285X-E78	D285S-E96	D175R-F11	D175X-F78	D175S-F106
1.3/8 - 1.1/2	34.92 - 38.10	D120R-D12	D120X-D79	D120S-D97	D285R-E12	D285X-E79	D285S-E97	D175R-F12	D175X-F79	D175S-F107
1.1/2 - 1.5/8	38.10 - 41.27	D120R-D13	D120X-D80	D120S-D98	D285R-E13	D285X-E80	D285S-E98	D175R-F13	D175X-F80	D175S-F108
1.5/8 - 1.3/4	41.27 - 44.45	D120R-D14	D120X-D81	-	D285R-E14	D285X-E81	D285S-E99	D175R-F14	D175X-F81	D175S-F109
1.3/4 - 1.7/8	44.45 - 47.62	D120R-D15	D120X-D82	-	D285R-E15	D285X-E82	-	D175R-F15	D175X-F82	D175S-F110
1.7/8 - 2	47.62 - 50.80	D120R-D16	D120X-D83	-	D285R-E16	D285X-E83	-	D175R-F16	D175X-F83	D175S-F111
2 - 2.1/8	50.80 - 53.97	D120R-D17	-	-	D285R-E17	D285X-E84	-	D175R-F17	D175X-F84	D175S-F112
2.1/8 - 2.1/4	53.97 - 57.15	-	-	-	D285R-E18	D285X-E85	-	D175R-F18	D175X-F85	-
2.1/4 - 2.3/8	57.15 - 60.32	-	-	-	D285R-E19	-	-	D175R-F19	D175X-F86	-
2.3/8 - 2.1/2	60.32 - 63.50	-	-	-	D285R-E20	-	-	D175R-F20	D175X-F87	-
2.1/2 - 2.5/8	63.50 - 66.67	-	-	-	D285R-E21	-	-	D175R-F21	D175X-F88	-
2.5/8 - 2.3/4	66.67 - 69.85	-	-	-	-	-	-	D175R-F22	-	-
2.3/4 - 2.7/8	69.85 - 73.02	-	-	-	-	-	-	D175R-F23	-	-
2.7/8 - 3	73.02 - 76.20	-	-	-	-	-	-	D175R-F24	-	-
3 - 3.1/8	76.20 - 79.37	-	-	-	-	-	-	D175R-F25	-	-

Emergency Collets with soft face and pilot hole is available for all types

QC & C Series Standard Accessories

Work Stops

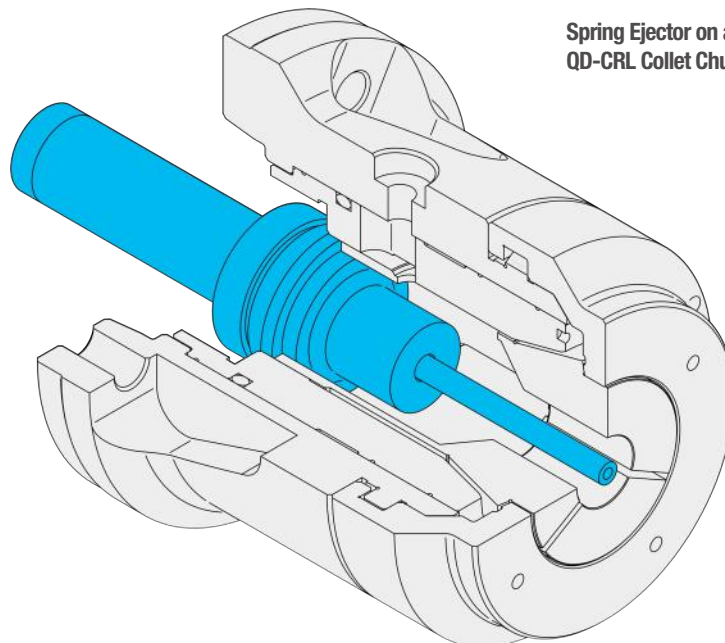
- Stops can be provided to allow for accurate z-axis positioning of short workpieces within the collet chuck.
- A threaded stud is provided for easy adjustment to suit your work piece
- All stops are easily installed from the front face utilising a side bolt to hold the stop securely in place.
- These stops can be installed on all QC & C series collet chucks.
- Full length spindle stops can also be provided for long work pieces, these can utilise the entire length of your machine spindle, please contact your Klamp supplier to see the maximum length stop your machine could accommodate.



Work stop on a QD-CRL Collet Chuck

Spring Ejectors

- Standard spring ejectors for QC & C series are used for second-spindle operations to expel finished workpieces into the parts catcher.
- Many variants of spring ejector are available to suit your production process.
- Spring ejectors can be installed on all QC & C series collet chucks.
- Full length hydraulic or pneumatic ejectors can also be provided for long work pieces, this can utilise the entire length of your machine spindle, please contact your Klamp supplier to see the maximum length stop your machine could accommodate.



Spring Ejector on a QD-CRL Collet Chuck