

# Workholding Solutions

for Hardinge® RS-Series, QUEST®-Series  
and ELITE®-Series CNC Lathes



<b>RS-Series</b> <b>QUEST-Series</b> <b>ELITE-Series</b> Workholding Options:	<b>RS 42</b> <b>6/42 – 6/42SP</b> <b>6/42</b> A2-5 Spindle	<b>RS 51</b> <b>8/51 – 8/51SP</b> <b>8/51</b> A2-6 Spindle	<b>RS 65</b> <b>10/65 – 10/65SP</b> <b>—</b> A2-6 Spindle	<b>All Model</b> <b>Sub-Spindles</b> A2-5 Spindle
<b>Collets (maximum capacities)</b>	<b>16C</b>	<b>20C</b>	<b>25C</b>	<b>16C</b>
Round–Smooth & serrated	1 <sup>5</sup> / <sub>8</sub> "	2"	2.559"	1 <sup>5</sup> / <sub>8</sub> "
Hex–Smooth	1 <sup>13</sup> / <sub>32</sub> "	1 <sup>3</sup> / <sub>4</sub> "	2.216"	1 <sup>13</sup> / <sub>32</sub> "
Square–Smooth	1 <sup>9</sup> / <sub>64</sub> "	1 <sup>27</sup> / <sub>64</sub> "	1.808"	1 <sup>9</sup> / <sub>64</sub> "
<b>Collet Stops</b>	Solid, Long, Ejector; Universal	Solid —	Solid —	Solid —
<b>Emergency Collet (pilot hole size)</b>	1/4", 1/16", 1/8", none	1/4" and none	1/2" and none	1/4", 1/16", 1/8", none
<b>Extended-Nose Emergency Collet (ext. length)</b>	1/2" and 1"	3/4" and 1 1/2"	—	1/2" and 1"
<b>HQC® Quick-Change Collets (max. capacities)</b>	<b>16C / 42mm</b>	<b>20C / 65mm</b>	<b>25C / 65mm</b>	<b>16C / 42mm</b>
Round–Smooth & serrated	1 <sup>3</sup> / <sub>4</sub> "	2.559"	2.559"	1 <sup>3</sup> / <sub>4</sub> "
Hex–Smooth	1 1/2"	2 <sup>5</sup> / <sub>32</sub> "	2 <sup>5</sup> / <sub>32</sub> "	1 1/2"
Square–Smooth	1 1/4"	1 <sup>3</sup> / <sub>4</sub> "	1 <sup>3</sup> / <sub>4</sub> "	1 1/4"
<b>Master Collets &amp; Pads–Style "S"</b> (maximum round capacities)	S12–1 1/4", S16–1 5/8"	S20–2"	S26–2 5/8"	S12–1 1/4", S16–1 5/8"
<b>Sure-Grip® Expanding Collet System (capacity)</b>				
Collet-Style	1/2" to 4"	—	—	1/2" to 4"
Spindle-Mount Style	1/8" to 4"	1" to 4"	1" to 4"	1/8" to 4"
<b>Master Expanding Collets - emergency pads</b>	1/4" to 3"	—	—	1/4" to 3"
<b>Step Chucks &amp; Closers - Emergency Style *</b>				
Regular-Depth Emergency (max. dia./depth)	2" to 6" / 1/2"	—	—	2" to 6" / 1/2"
Extra-Depth Emergency (max. dia./depth)	2" to 6" / 1 1/4"	3" to 6" / 1 1/4"	4" - 8" / 1 3/4"	2" to 6" / 1 1/4"
<b>Force-Limiting Step Chuck</b>	on application	on application	on application	on application
<b>Dead-Length Control - Emergency Style *</b>				
Collet style (max. diameter bore)	1 <sup>13</sup> / <sub>32</sub> "	—	—	1 <sup>13</sup> / <sub>32</sub> "
Thru-hole Collet (max. round capacity)	1 <sup>3</sup> / <sub>16</sub> "	—	—	1 <sup>3</sup> / <sub>16</sub> "
Step Chuck (max. diameter bore)	2 <sup>3</sup> / <sub>4</sub> "	3 1/2"	—	2 <sup>3</sup> / <sub>4</sub> "
Spider-Stop Step Chuck (max. diameter bore)	3", 4"	—	—	3", 4"
Sub-Spindle Adapter for 16C to #22 B&S	—	—	—	16C to #22 B&S
<b>Sure-Grip® 3-Jaw Power Chuck (diameter)</b>	6" – 5", 8" opt.	6" – 8", 10" opt.	8" – 10" opt.	6" – 5", 8" opt.
<b>Hydraulic Shape Compliant Chuck</b>	on application	on application	on application	on application
<b>Headstock Centers</b>	YES	YES	YES	YES
<b>Spindle Adapters</b>	16C to 5C 16C to #22 B&S	20C to 16C —	25C to 16C —	16C to 5C 16C to #22 B&S
<b>Fixtures</b>				
Spindle-Mount Style	5 1/2", 8 7/8"	—	—	5 1/2", 8 7/8"
Collet-Style	6 3/8"	—	—	6 3/8"
Angle Plate	8 7/8"	—	—	8 7/8"

\* also available hardened and ground

# Take your collet-ready lathe to the limit with flexible workholding options...



Hardinge is unique as a machine tool builder — we manufacture our own workholding products! Precision and accuracy is yours when you use Hardinge perfectly-mated workholding products...

## Collets

Hardinge hardened and ground collets are inspected and measured in a Hardinge Super-Precision® spindle. Collets are available in fractional round, hex and square sizes, round metric, as well as round serrated fractional and metric sizes. Use adjustable, machinable collet stops for accurate part positioning.



## Emergency Collets

Emergency collets have a soft face with a pilot hole for customer drilling, boring and stepping out to the exact size required. An optional extended nose permits deeper counterbores when required, and tool clearance for extended work.

## HQC® Quick-Change Collet Systems

The spindle mount assembly incorporates interchangeable quick-change heads.

Collets have a working range of  $\pm 1/64$ " (.396mm) for under a 2" (50.8mm) diameter, and  $\pm 1/32$ " (.793mm) for a 2" (50.8mm) diameter and over, making them ideal for bar work. True parallel gripping affords high feed rates and spindle speeds.



## Style "S" Master Collets and Pads

Pads can be changed much quicker than solid collets can. Pads cost less and use less storage space when compared to a standard solid collet. Choose from hardened and ground, semi-hard and emergency pads. Styles S16, S20 and S26 require a collet closer.

## Sure-Grip® Expanding Collet Systems

The Hardinge Sure-Grip expanding collet provides high precision internal gripping solutions with true parallel gripping. Collet-style and spindle-mount styles are available, depending on the machine model.



Master Expanding Collets are a lower-cost alternative to Sure-Grip Expanding Collet Systems and include a dead-length feature.

## Step Chucks and Closers

Step Chucks and closers are used to accurately hold larger diameter parts.



## Force-Limiting Step Chuck

The Hardinge force-limiting step chuck has built-in force control to safely grip thin-wall parts. Maintain inside and outside concentricity in a fail-safe process while eliminating the nuisance of manually tweaking the draw bar.



## Dead-Length® Systems

Maintain part length control by using Hardinge dead-length systems. Choose from dead-length collet assemblies, thru-hole collets, step chucks and spider-stop step chucks. I6C to #22 B&S adapter shown on sub-spindle.



## Shape-Compliant Chuck

Exclusive to Hardinge machines is the hydraulic shape-compliant chuck. It's the solution to high-accuracy roundness of thin-wall, thru-hardened parts. Multiple gripping locations grip the thin wall or out-of-round part. Independent travel distance for each gripping location eliminates distortion.



## 3-Jaw Power Chucks

Hardinge power chucks are lever operated, counter-centrifugal and dynamically balanced. Quick-change chucks are also available.



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