

# 5C<sup>2</sup> Indexers



The 5C<sup>2</sup> Rotary System is based on a long history of Hardinge 5C spindle and manual indexer designs. Over 60 years of Hardinge-engineered and proven mechanical elements guarantee an accurate, repeatable, reliable and flexible product.



## Standard Features

- Curved front casting and removable handle for increased spindle clearance and better tool access
- Rapid indexing speed up to 360° per second
- 10 arc-sec Repeatability
- ±30 arc sec Accuracy
- .0002" (.005mm) Maximum runout (TIR)
- Robust, dual-bearing spindle accommodates heavier axial and radial loads with the ability to run a triple or quad unit with tailstocks
- Brushless motor
- Industry compatible – same spindle centerline, foot print and tool clearance as previous Hardinge products and other US-made brands for direct replacement
- Single, dual, triple and quad spindle configurations
- Operate with the new Hardinge all-digital indexer control or interface to your machine
- Uses standard 5C collets, Sure-Grip® expanding collets, step chucks and manual jaw chucks

## Optional Features

- Collet closers – manual, pneumatic fail-safe through-hole and pneumatic high-force
- Tailstocks – manual and pneumatic
- Quill Switch for Bridgeport® knee mill to automate the indexing process
- Manual drawbar for each spindle for multi-spindle units
- Preset tailstock and indexer combinations – self-contained units mounted on a subplate for easy placement on and off the machine table to maintain factory tolerances
- Complete array of Hardinge spindle tooling

### INDEXER CONTROL / PROGRAMMING

Control Model	Standard Indexer Control
Storage - Number of programs/steps	9999 / 500
RS-232 Interface	YES
Text Display	multiple lines
USB	YES
Baud Rate Capacity	19.2bps

### SPINDLE

Runout Maximum (TIR)	0.0002" (.005)
Backlash	40 arc-sec
Speed	0.001 to 360° per sec
Maximum RPM Rapid <sup>Min-1</sup>	60
Load Support – max. part weight	Dual Bearing 50 lb / 23 kg
Spindle Type	2 <sup>3</sup> / <sub>16</sub> – 10 threaded nose
Collets	Standard 5C
Spindle center to base	4.000" ± 0.001 (101.6 ± 0.254)

### POSITIONING

Accuracy (arc-sec)	±30 arc-sec
Repeatability	10 arc-sec
Resolution (degree)	0.001
Max Rotation/Step (degree)	9999.99 <sup>1</sup>
Gear Diameter	2.8" (71.1)

### MOTOR

Type (DC servo)	0.78hp / 0.58KW
Torque at Spindle	54 ft-lb / 73 Nm
Gear Ratio (worm & gear)	60:1

### OPERATING SPECIFICATIONS

Duty Cycle	90% at full speed
Operating Temp. (maximum ambient)	104°F / 40°C
Power Requirements (VAC)	115 +/- 5% @ 10 amps
Maximum Air Pressure	120 psi / 8.3 bar
Max Air Pressure using Fail-Safe Collet Closer	85 psi / 5.8 bar

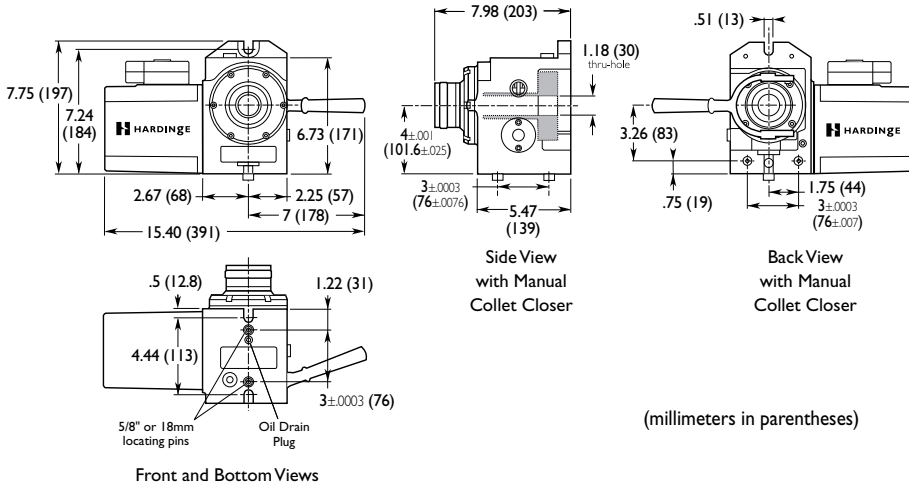
### WEIGHT

Single Indexer	55 lb / 25 kg
Dual Indexer	119 lb / 54 kg
Triple Indexer	179 lb / 81 kg
Quad Indexer	240 lb / 109 kg
Control	10 lb / 4.5 kg

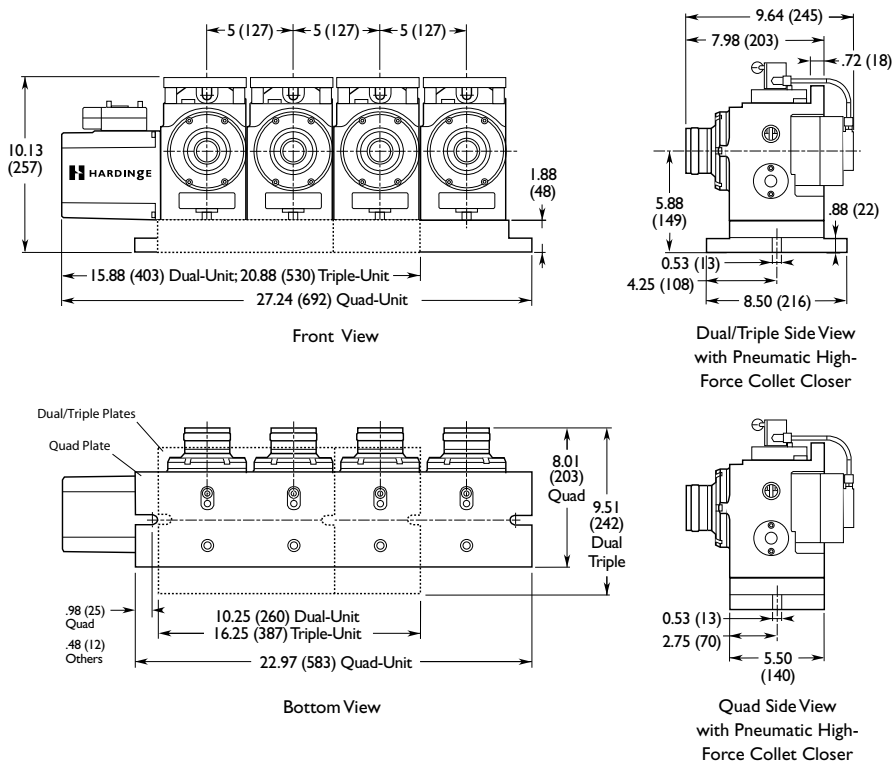
NOTE: 1 – continuous rotation available



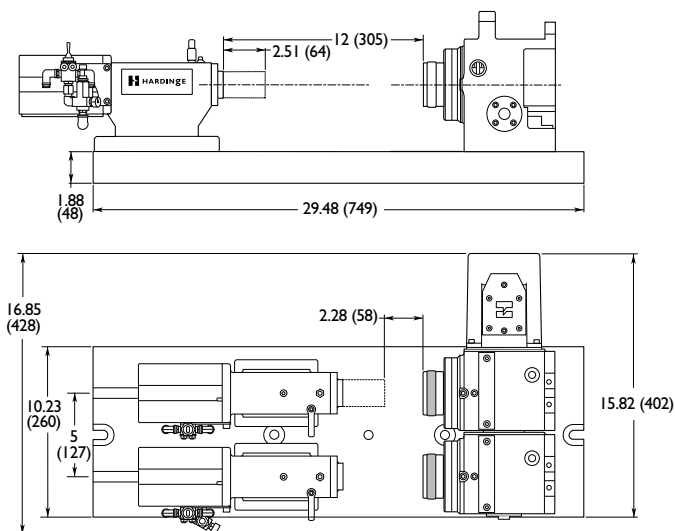
### GD5C2 Dimensions:



### GD5C2-02, -03, and -04 Dimensions:



### Preset Tailstock and Indexer Dimensions:



### Workholding Capacities

Collets – Round (max. capacity)	1 1/16" (26.98)
Collets – Hex (max. capacity)	2 9/32" (23.01)
Collets – Square (max. capacity)	3/4" (19.05)
Step Chucks – Regular Depth	up to 6" (152.4)
Step Chucks – Extra Depth	up to 6" (152.4)
3-Jaw Chuck	5" (127)
3-Jaw Chuck	6" (152.4)
Sure-Grip® Expanding Collets	1/8" - 3" (3.17 - 76.2)
Fixture Plate – Spindle Mount	3" (76.2)
Fixture Plate – Spindle Mount	5" (127)
Fixture Plate – Collet Style	3 3/8" (85.72)
Fixture Plate – Collet Style	4 3/8" (111.12)
Collet Stops for part positioning	YES

### Bridgeport Knee Mill Remote Quill Switch

A remote quill switch is available for use with manual Bridgeport® mills. When the quill handle is retracted, it touches a micro switch on the clamp for automatic indexing, eliminating the need to push the start button on the servo control. The bracket and interface cable are included.

### Preset Tailstock and Rotary Combinations

**SINGLE:** Pneumatic Tailstock with valve, Pneumatic Rotary Unit, Double Mounting Plate and Indexer Control

**DUAL:** Two Pneumatic Tailstocks with valving, Dual-unit Pneumatic Rotary Unit, Double Mounting Plate and Indexer Control

(Dual, triple and quad rotary indexers are mounted on a single sub plate. Pneumatic closers and valve assemblies are required for multi-spindle units and are ordered separately)



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