

5C² Indexers

The 5C² 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.

GD5C2
GD5C2-02
GD5C2-03
GD5C2-04



Standard Features

- Curved front casting and removable handle for increased spindle clearance and better tool access
- Rapid indexing speed up to 360° per second
- ±5 arc-sec Repeatability
- ±25 arc sec Accuracy
- .0002" (.005mm) Maximum runout (TIR)
- Robust, dual-bearing spindle accommodates heavy 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 Hardinge all-digital indexer control or interface to your machine
- Uses standard 5C collets, Sure-Grip® expanding collets, step chucks and manual jaw chucks

Options

- Collet closers – manual, pneumatic fail-safe through-hole and pneumatic high-force
- Tailstocks and plate trunnions
- 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

Preset Tailstock and Rotary Combinations

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

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

INDEXER CONTROL / PROGRAMMING	
Indexer Control Model	Standard Indexer Control
Storage - Number of programs/steps	9999/500
RS-232 Interface	YES
LCD Display	multiple lines
USB 2.0 Upload/Download	YES
Baud Rate Capacity	19.2 BPS
SPINDLE	
Runout Maximum (TIR)	0.0002" (.005)
Backlash	40 arc-sec
Speed - single	0.001 to 360° per sec
- multi	0.001 to 180° per sec
Maximum RPM Rapid ^{Min.-} single	60
- multi	30
Load Support – max. part weight	Dual Bearing 50 lb / 23 kg
Spindle Type	2 ³ / ₁₆ – 10 threaded nose
Collets	Standard 5C
Spindle center to base	4.000" ± 0.001 (101.6 ± 0.0254)
POSITIONING	
Accuracy (arc-sec)	±30 arc-sec
Repeatability	±5 arc-sec
Resolution (degree)	0.001
Max Rotation/Step (degree) ¹	9999.99
Gear Diameter	2.8" (71.1)
MOTOR	
Type (DC servo)	0.78hp / 0.58KW
Torque at Spindle	54 ft.-lb / 73 Nm
Duty Cycle	90% at full speed
OPERATING SPECIFICATIONS	
Gear Ratio (worm & gear)	60:1
Operating Temp. (maximum ambient)	120°F / 49°C
Power Requirements (VAC)	115 +/- 5% @ 10 amps
Max Air Pressure using High-Force Collet Closer	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





Workholding Capacities

Collets – Round (max. capacity)	1 1/16" (26.98)
Collets – Hex (max. capacity)	29/32" (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)
Slotted Face Plate (diameter)	7" (178)
Collet Stops for part positioning	YES

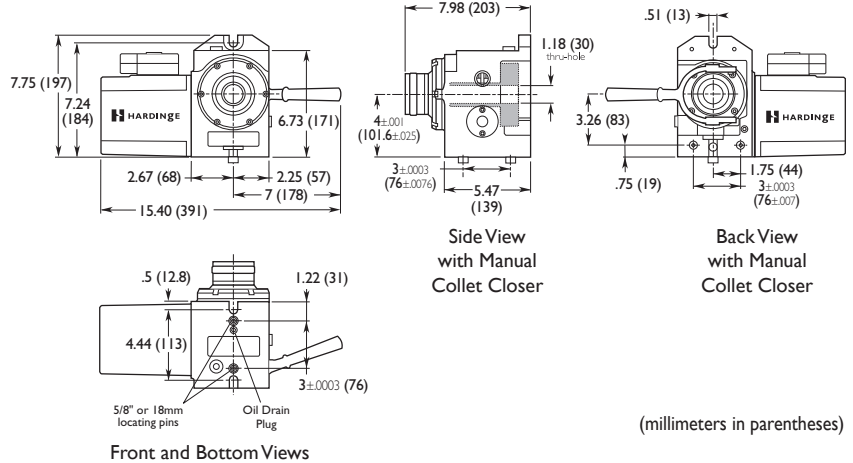
Slotted face plates can be used for "light duty" off-center work only.

Bridgeport Knee Mill Remote Quill Switch

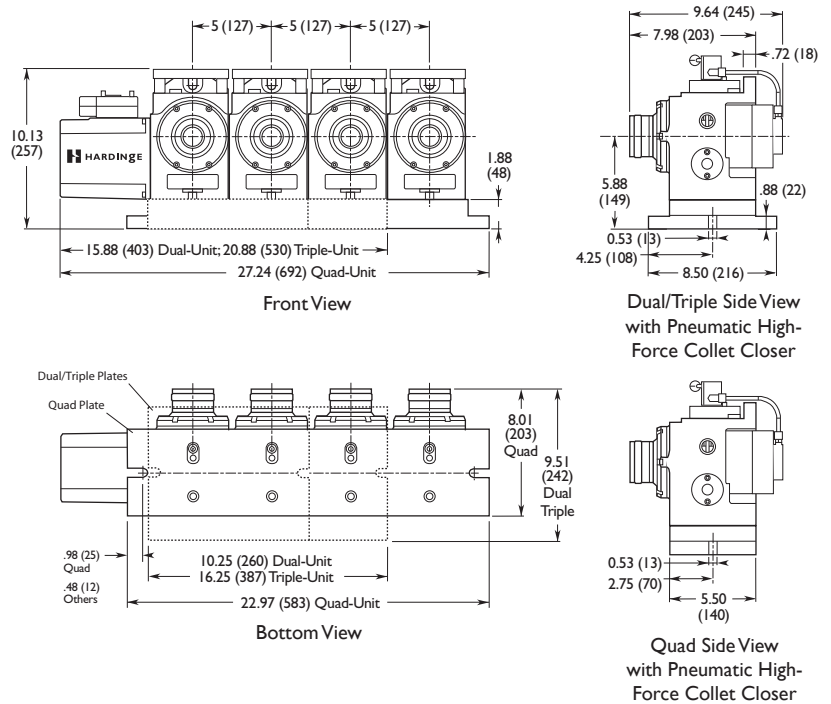
A remote quill switch is available for use with manual Bridgeport® mills. When the quill handle is retracted, it touches a micro switch for automatic indexing, eliminating the need to push the start button on the servo control. The bracket and interface cable are included.



GD5C2 Dimensions:



GD5C2-02, -03 and -04 Dimensions:



Preset Tailstock and Indexer Dimensions:

