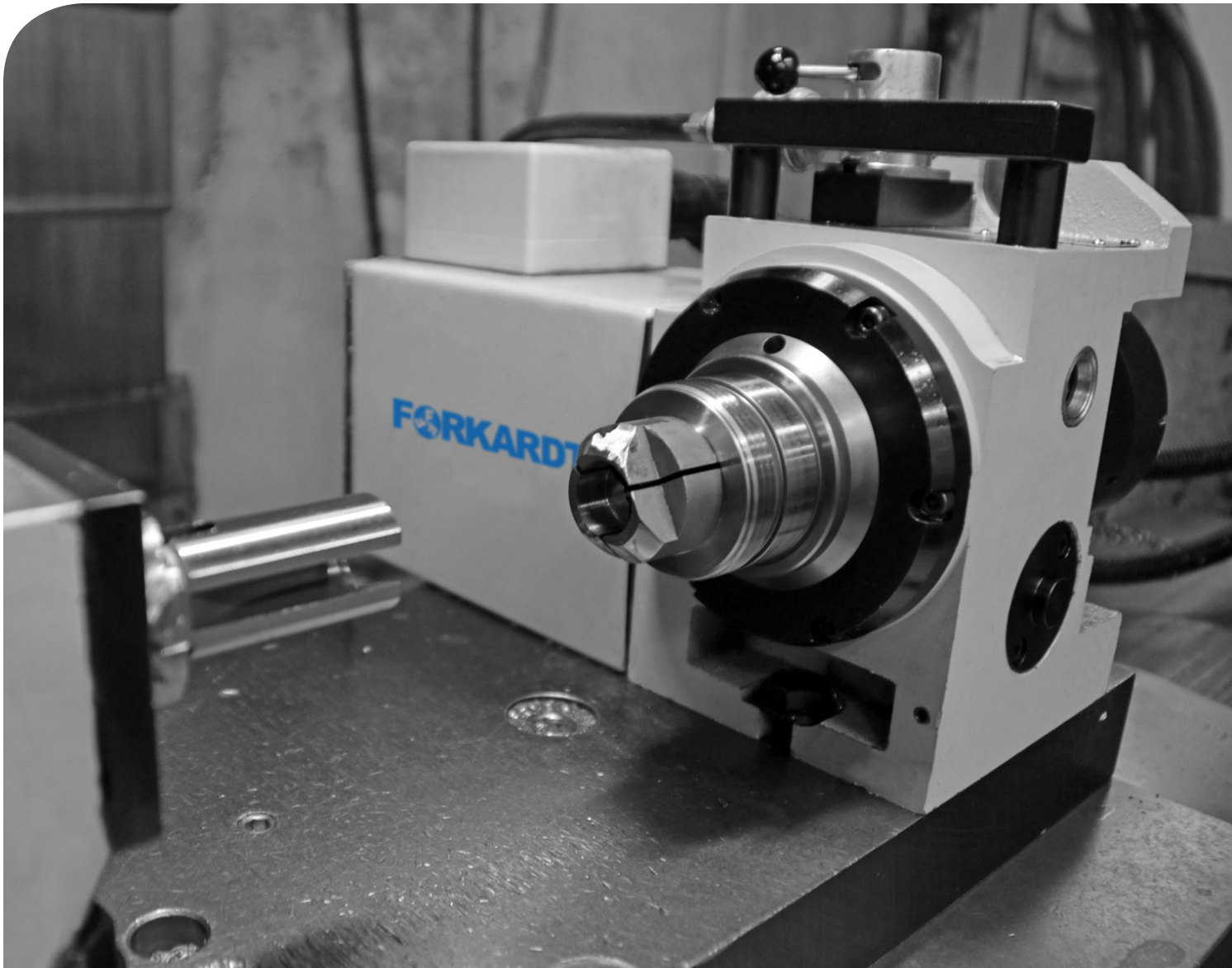




# TABLE OF CONTENTS

Plug-n-Perform .....	4
Bridgeport Machining Center Rotary Packages:	
Bridgeport Series I .....	5
Bridgeport GX 300 .....	6
Bridgeport GX 480 .....	7
Bridgeport GX 480APC .....	8
Bridgeport GX 510 .....	9
Bridgeport GX 710 .....	10
Bridgeport GX 1000, GX 1300, -50, GX 1600, -50 .....	11
Forkardt Rotary Accessories	
4th Axis Rotary Packages .....	13
Plate & Cube Trunnions .....	13
Tailstocks .....	13
Collet Blocks .....	13
Forkardt Rotary Specifications .....	14
Forkardt Rotary Dimensions	
GD5C2 Indexer .....	15
GD16C2 & GD3J2 Rotary Tables .....	16
GD160LP & GD210LP Rotary Tables .....	17
PT5C2, PTA25 & CTA25 Plate & Cube Trunnions .....	18
Tailstocks: manual & pneumatic .....	19





## Positioning you for success!

Forkardt and Bridgeport make it easy to select & connect a rotary to your machine for 4th or 4th and 5th-axis part positioning. Forkardt gives you the tools to increase your machine capability with rapid positioning speeds and fast changeover with the most flexible, quick-change workholding concept on the market! Forkardt rotary products incorporate a 5C threaded-nose or an A2-4 / A2-5 spindle that will accept collets, expanding collets and step chucks to expand part gripping capabilities for improved part accuracies.

Forkardt has a large selection of rotary products for all ranges of production. Choose precision positioning – single-spindle, multi-spindle & tilting, dual-axis configurations depending on the Bridgeport machining center capacity.

In the following pages, we've listed the compatible rotary systems by current model Bridgeport machines utilizing Fanuc controls. Rotary dimensions and specifications are shown in the back of this brochure along with rotary accessories.

The Forkardt rotary packages in this brochure include the Fanuc drive kit, motor & cables to connect via 4th-axis to a new, pre-wired Bridgeport vertical machining center with a Fanuc control.

The new Bridgeport VMC must be prewired to accept the rotary package. For existing machines in the field, contact Forkardt to establish what, if any, additional components may be required. Rotary systems can also be operated using just the Forkardt indexer control if true 4th-axis is not required.



### TILTING DUAL-AXIS

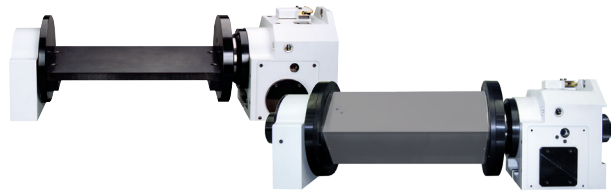


LPX5C2-02  
LPX5C2-03  
LPX5C2-04



GDX5C2

### PLATE/CUBE TRUNNIONS



PT5C2  
PTA25  
CTA25

# BRIDGEPORT SERIES 1

Worktable	
Standard	49 x 9 in (1,245 x 299mm)
T Slot center distance	3 @ 2.5 in (64mm)
T-Slot Size	0.625 in (16mm)
Height Above Floor (Max.)	47.25 in (1,200mm)
Weight of Workpiece (Max.)	750 lb (340 kg)
Speed Range	
High (Infinitely Variable)	500 – 4,200 RPM @ 60 Hz
Low	60 – 500 RPM @ 60 Hz
Power Quill Feed	0.0015 in/rev (0.038mm)
Manual Adjust	0.003 in/rev (0.076mm)
Manual Adjust	0.006 in/rev (0.152mm)



## Compatible Standalone Indexer Packages

	<p>GD5C1MC    GD5C2 Indexer with Manual Collet Closer and Indexer Control</p>
	<p>GD5C1HF    GD5C2 Indexer with High-Force Collet Closer and Indexer Control</p>
	<p>GD5C1FS    GD5C2 Indexer with Fail-Safe Collet Closer and Indexer Control</p>
	<p>GD16C1    GD16C2 Indexer with Pneumatic Collet Closer, Indexer Control and Pneumatic Clamp</p>

Rotary packages include the Forkardt Servo Control and a 4-wire interface cable with Quill Switch to automate the indexing process.

# BRIDGEPORT GX300

Spindle Speed	7,083 RPM (optional 10,000)
Spindle Horsepower	20 HP (15kW)
Spindle Taper	No. 40 Big Plus
Working Surface	23.6" x 15.8" (599.44mm x 401.32mm)
Travels: X,Y,Z	11.80" x 15.76" x 16.94" (300mm x 400mm x 430mm)



## Compatible 4th-Axis Rotary Packages

GD5C1FMC GD5C2 Rotary Table with Manual Collet Closer\*

GD5C1FHF GD5C2 Rotary Table with High-Force Collet Closer\*

GD5C1FFS GD5C2 Rotary Table with Fail-Safe Collet Closer\*



GD5C2FHF GD5C2-02 Dual-Spindle Rotary Table with High-Force Collet Closers\*

GD5C2FFS GD5C2-02 Dual-Spindle Rotary with Fail-Safe Collet Closers\*



GD5C3FHF GD5C2-03 Triple-Spindle Rotary Table with High-Force Collet Closers\*

GD5C3FFS GD5C2-03 Triple-Spindle Rotary with Fail-Safe Collet Closers\*



GD5C4FHF GD5C2-04 Quad-Spindle Rotary Table with High-force Collet Closers\*

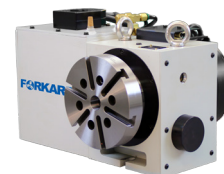
GD5C4FFS GD5C2-04 Quad-Spindle Rotary Table with Fail-Safe Collet Closers\*



GD16C1F GD16C2 Rotary Table with Pneumatic Collet Closer and Pneumatic Clamp\*



LPI6F GD160LP 160mm Rotary Table with A2-4 (5C) Spindle Nose, Pneumatic Clamp and Slotted Face Plate\*



\* 4th-axis rotary packages include 4th-axis 20-amp drive kit and Fanuc motor and cable set to connect to the machine interface.

# BRIDGEPORT GX 480

Spindle Speed	10,000
Spindle Horsepower	7.5/10/20 HP (5.5/7.5/15 kW)
Spindle Taper	No. 40 Big Plus
Working Surface	23.6" x 15.8" (599.44mm x 401.32mm)
Travels: X,Y,Z	18.90" x 15.75" x 16.93" (480mm x 400mm x 430mm)



## Compatible 4th-Axis Rotary Packages

GD5C1FMC GD5C2 Rotary Table with Manual Collet Closer\*

GD5C1FHF GD5C2 Rotary Table with High-Force Collet Closer\*

GD5C1FFS GD5C2 Rotary Table with Fail-Safe Collet Closer\*



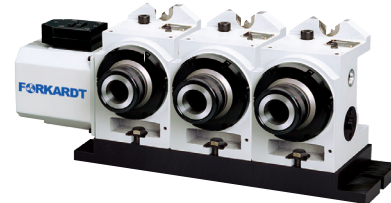
GD5C2FHF GD5C2-02 Dual-Spindle Rotary Table with High-Force Collet Closers\*

GD5C2FFS GD5C2-02 Dual-Spindle Rotary with Fail-Safe Collet Closers\*



GD5C3FHF GD5C2-03 Triple-Spindle Rotary Table with High-Force Collet Closers\*

GD5C3FFS GD5C2-03 Triple-Spindle Rotary with Fail-Safe Collet Closers\*



GD5C4FHF GD5C2-04 Quad-Spindle Rotary Table with High-force Collet Closers\*

GD5C4FFS GD5C2-04 Quad-Spindle Rotary Table with Fail-Safe Collet Closers\*



GDI6C1F GDI6C2 Rotary Table with Pneumatic Collet Closer and Pneumatic Clamp\*



LPI6F GDI60LP 160mm Rotary Table with A2-4 (5C) Spindle Nose, Pneumatic Clamp and Slotted Face Plate\*



\* 4th-axis rotary packages include 4th-axis 20-amp drive kit and Fanuc motor and cable set to connect to the machine interface.

# BRIDGEPORT GX480APC

Spindle Speed	10,000 (12,000/15,000 option)
Spindle Horsepower	7.5/10 HP (5.5/7.5 kW)
Spindle Taper	No. 40
Working Surface	23.6" x 15.8" (599.44mm x 401.32mm)
Travels: X,Y,Z	18.9" x 15.8" x 16.9" (480mm x 401mm x 429mm)



## Compatible 4th-Axis Rotary Packages

GD5C1FMC GD5C2 Rotary Table with Manual Collet Closer\*

GD5C1FHF GD5C2 Rotary Table with High-Force Collet Closer\*

GD5C1FFS GD5C2 Rotary Table with Fail-Safe Collet Closer\*



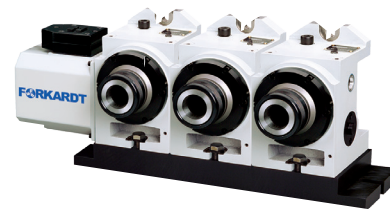
GD5C2FHF GD5C2-02 Dual-Spindle Rotary Table with High-Force Collet Closers\*

GD5C2FFS GD5C2-02 Dual-Spindle Rotary with Fail-Safe Collet Closers\*



GD5C3FHF GD5C2-03 Triple-Spindle Rotary Table with High-Force Collet Closers\*

GD5C3FFS GD5C2-03 Triple-Spindle Rotary with Fail-Safe Collet Closers\*



To mount the 5C Rotaries to the 480APC pallet tables, toe clamps or special mounting plates are required to match the bolt pattern in the machine pallets. Special care must also be taken for cable routing and air line plumbing.

\* 4th-axis rotary packages include 4th-axis 20-amp drive kit and Fanuc motor and cable set to connect to the machine interface.



# BRIDGEPORT GX 510

Spindle Speed	7,083 RPM (10,000 option)
Spindle Horsepower	20 HP (15kW)
Spindle Taper	No. 40 BIG-PLUS®
Working Surface	23.6" x 15.8" (599.44mm x 401.32mm)
Travels: X,Y,Z	20" x 15.8" x 16.9" (510mm x 400mm x 430mm)



## Compatible 4th-Axis Rotary Packages

GD5C1FMC	GD5C2 Rotary Table with Manual Collet Closer*	
GD5C1FHF	GD5C2 Rotary Table with High-Force Collet Closer*	
GD5C1FFS	GD5C2 Rotary Table with Fail-Safe Collet Closer*	

GD5C2FHF	GD5C2-02 Dual-Spindle Rotary Table with High-Force Collet Closers*	
GD5C2FFS	GD5C2-02 Dual-Spindle Rotary Table with Fail-Safe Collet Closers*	

GD5C3FHF	GD5C2-03 Triple-Spindle Rotary Table with High-Force Collet Closers*	
GD5C3FFS	GD5C2-03 Triple-Spindle Rotary Table with Fail-Safe Collet Closers*	

GD5C4FHF	GD5C2-04 Quad-Spindle Rotary Table with High-force Collet Closers*	
GD5C4FFS	GD5C2-04 Quad-Spindle Rotary Table with Fail-Safe Collet Closers*	

GDI6CIF	GDI6C2 Rotary Table with Pneumatic Collet Closer and Pneumatic Clamp*	
---------	---	--

LPI6F	GDI60LP 160mm Rotary Table with A2-4 (5C) Spindle Nose, Pneumatic Clamp and Slotted Face Plate*	
-------	---	--

\* 4th-axis rotary packages include 4th-axis 20-amp drive kit and Fanuc motor and cable set to connect to the machine interface.

# BRIDGEPORT GX 710

Spindle Speed	10,000 RPM
Spindle Horsepower	7.5/10/20 HP (5.5/7.5/15 kW)
Spindle Taper	No. 40 BIG-PLUS®
Working Surface	31.5" x 15.8" (800 mm x 400 mm)
Travels: X,Y,Z	27.95" x 15.75" x 16.93" (710mm x 400mm x 430mm)



## Compatible 4th-Axis Rotary Packages

GD5C1FMC GD5C2 Rotary Table with Manual Collet Closer\*

GD5C1FHF GD5C2 Rotary Table with High-Force Collet Closer\*

GD5C1FFS GD5C2 Rotary Table with Fail-Safe Collet Closer\*



GD5C2FHF GD5C2-02 Dual-Spindle Rotary Table with High-Force Collet Closers\*

GD5C2FFS GD5C2-02 Dual-Spindle Rotary Table with Fail-Safe Collet Closers\*



GD5C3FHF GD5C2-03 Triple-Spindle Rotary Table with High-Force Collet Closers\*

GD5C3FFS GD5C2-03 Triple-Spindle Rotary Table with Fail-Safe Collet Closers\*



GD5C4FHF GD5C2-04 Quad-Spindle Rotary Table with High-force Collet Closers\*

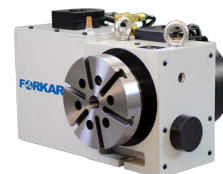
GD5C4FFS GD5C2-04 Quad-Spindle Rotary Table with Fail-Safe Collet Closers\*



GD16CIF GD16C2 Rotary Table with Pneumatic Collet Closer and Pneumatic Clamp\*



LPI6F GD160LP 160mm Rotary Table with A2-4 (5C) Spindle Nose, Pneumatic Clamp and Slotted Face Plate\*



\* 4th-axis rotary packages include 4th-axis 20-amp drive kit and Fanuc motor and cable set to connect to the machine interface.

# BRIDGEPORT GX 1000, 1300, 1600

## Bridgeport GX 1000

Spindle Speed	10,000 RPM
Spindle Horsepower	15/20/34.8 HP (11/15/26 kW)
Spindle Taper	No. 40 BIG-PLUS®
Working Surface	44.09" x 21.25" (1,120mm x 540mm)
Travels: X,Y,Z	40.16" x 21.25" x 21.25" (1,020mm x 540mm x 540mm)



## Bridgeport GX 1300

Spindle Speed	12,000 RPM
Spindle Horsepower	20/25/34.8 HP (15/18.5/26 kW)
Spindle Taper	No. 40 BIG-PLUS®
Working Surface	56" x 27.5" (1,425mm x 700mm)
Travels: X,Y,Z	51.8" x 27.55" x 25" (1,300mm x 700mm x 635mm)



## Bridgeport GX 1600

Spindle Speed	10,000 RPM
Spindle Horsepower	20/25/34.8 HP (15/18.5/26 kW)
Spindle Taper	No. 40 BIG-PLUS®
Working Surface	66.93" x 27.55" (1,700mm x 700mm)
Travels: X,Y,Z	62.99" x 27.55" x 25" (1,600mm x 700mm x 635mm)



# BRIDGEPORT GX 1000, 1300, 1600

## Compatible 4th-Axis Rotary Packages

GD5C1FMC	GD5C2 Rotary Table with Manual Collet Closer*	
GD5C1FHF	GD5C2 Rotary Table with High-Force Collet Closer*	
GD5C1FFS	GD5C2 Rotary Table with Fail-Safe Collet Closer*	
GD5C2FHF	GD5C2-02 Dual-Spindle Rotary Table with High-Force Collet Closers*	
GD5C2FFS	GD5C2-02 Dual-Spindle Rotary with Fail-Safe Collet Closers*	
GD5C3FHF	GD5C2-03 Triple-Spindle Rotary Table with High-Force Collet Closers*	
GD5C3FFS	GD5C2-03 Triple-Spindle Rotary with Fail-Safe Collet Closers*	
GD5C4FHF	GD5C2-04 Quad-Spindle Rotary Table with High-force Collet Closers*	
GD5C4FFS	GD5C2-04 Quad-Spindle Rotary Table with Fail-Safe Collet Closers*	
GD16C1F	GD16C2 Rotary Table with Pneumatic Collet Closer & Pneumatic Clamp*	
LPI6F	GD160LP 160mm Rotary Table with A2-4 (5C) Spindle Nose, Pneumatic Clamp and Slotted Face Plate*	

\* 4th-axis rotary packages include 4th-axis 20-amp drive kit and Fanuc motor and cable set to connect to the machine interface.

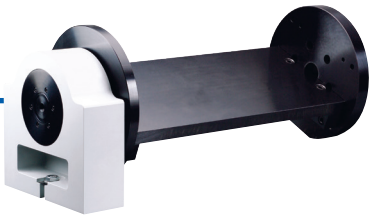
## Plate & Cube Trunnions

CI 0002483A 4 x 10" (101.6 x 254mm) Plate Trunnion (PT5C2) fits GD5C2 and GD160LP Rotary Units (1" Riser required for GD160LP)

Compatible with GX Series 600, 710, 1000, 1300 & 1600

CJA0002483AL 7 x 16.73" (177.8 x 425mm) Plate Trunnion (PTA25) fits GD16C2 and GD210LP

Compatible with GX 710 (GD210LP rotary unit only), GX 1000, GX 1300 & GX 1600



CJ 0002483A6 4 x 18" (101.6 x 457mm) Cube Trunnion (CTA25-4IN) fits GD16C2 and GD210LP

CJ 0002483A4 6 x 18" (152.4 x 457mm) Cube Trunnion (CTA25-6IN) fits GD16C2 and GD210LP

Compatible with GX Series 1000, 1300 & 1600



## Tailstocks

CI 0000003M GD5C2 Manual Tailstock

CJ 0000003M GD16C2, GD3J2 and GD210LP Manual Tailstock

LI 0000003M GD160LP Manual Tailstock



CI 0000003 GD5C2 Pneumatic Tailstock with valving

CJ 0000003 GD16C2, GD3J2 and GD210LP Pneumatic Tailstock with valving

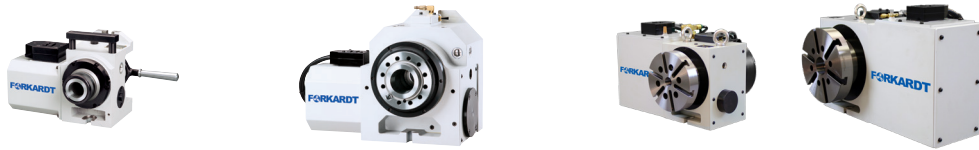
LI 0000003 GD160LP Pneumatic Tailstock with valving



## Collet Blocks for Trunnions & Towers



# ROTARY SPECIFICATIONS

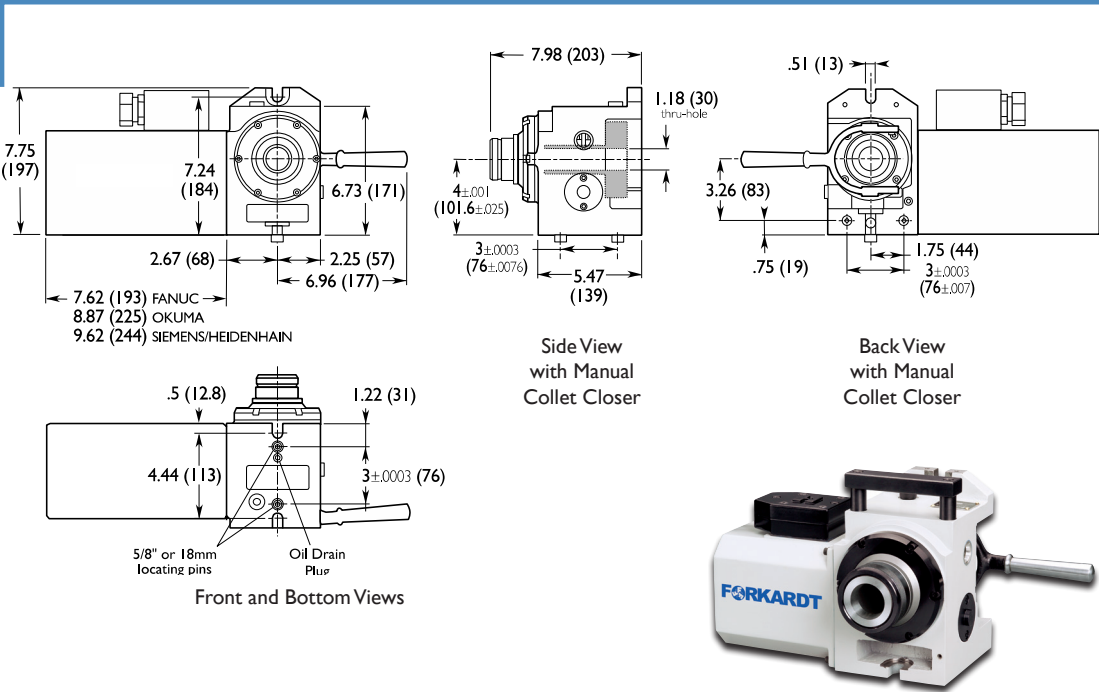


	GD5C2	GD16C2	GD3J2	GD160LP	GD210LP
<b>SPINDLE</b>					
Runout Maximum (TIR)	0.0002" (.005)	0.0002" (.005)	0.0002" (.005)	0.0002" (.005)	0.0002" (.005)
Backlash	40 arc-sec	40 arc-sec	40 arc-sec	40 arc-sec	40 arc-sec
Speed	0.001 to 360° /sec	0.001 to 300° /sec	0.001 to 300° /sec	0.001 to 240° /sec	0.001 to 240° /sec
Maximum RPM Rapid <sup>Min-1</sup>	60	50	50	40	40
Load Support	Dual Bearing	Dual Angular Contact Bearing	Dual Angular Contact Bearing	Dual Bearing	Dual Bearing
Maximum Part Weight	50lb/23kg	150lb/68kg	150lb/68kg	100lb/45kg	220lb/100kg
Spindle Type	2 3/16 –10 threaded nose	A2-5	A2-5	A2-4	A2-5
Table Diameter	—	—	—	6.299" (160)	8.267" (210)
Thru Diameter (maximum)	.311-1.18" (7.9-30.0)	1.62" (41.27)	1.75" (44.4)	1-1.08" (25.4-27.4)	1.625-2.00" (41.27-50.4)
Collets	Standard 5C	Std. 16C	Std. 3J	Standard 5C	Standard 16C
Spindle Center-to-Base	4.000" ± 0.001 (101.6 ±.0254)	6.000" ± 0.001 (152.4 ±.0254)	6.000" ± 0.001 (152.4 ±.0254)	5.000" ± 0.001 (127 ±.0254)	6.000" ± 0.001 (152.4 ±.0254)
<b>POSITIONING</b>					
Accuracy	±25 arc-sec	±15 arc-sec	±15 arc-sec	±20 arc-sec	±15 arc-sec
Repeatability	10 arc-sec	10 arc-sec	10 arc-sec	10 arc-sec	10 arc-sec
Resolution (degree)	0.001	0.001	0.001	0.001	0.001
Max Rotation / Step (degree)	9999.99	9999.99	9999.99	9999.99	9999.99
Gear Diameter	2.8" (71.1)	6.2" (157)	6.2" (157)	3.7" (94)	6.2" (157)
<b>MOTOR</b>					
Type (DC servo)	0.78hp/0.58kW	0.78hp/0.58kW	0.78hp/0.58kW	0.78hp/0.58kW	1.25hp/0.93kW
Clamping Torque I	—	175ft-lb/ 237Nm	175ft-lb/ 237Nm	150ft-lb/ 203 Nm	275ft-lb/ 373 Nm
Torque at Spindle	54ft-lb/ 73Nm	70ft-lb/ 95Nm	70ft-lb/ 95Nm	73ft-lb/ 99Nm	90ft-lb/ 122Nm
Gear Ratio (Worm & Gear)	60:1	60:1	60:1	90:1 worm, gear and timing belt	90:1 worm, gear and timing belt
Duty Cycle	90% at full speed	90% at full speed	90% at full speed	90% at full speed	90% at full speed
<b>OPERATING SPECS</b>					
Operating Temp. (Max. Amb.)	104°F/40°C	104°F/40°C	104°F/40°C	104°F/40°C	104°F/40°C
Power Requirements (VAC)	115 +/- 5% @10 amps	115 +/- 5% @10 amps	115 +/- 5% @10 amps	115 +/- 5% @10 amps	115 +/- 5% @10 amps
Maximum Air Pressure	120psi/8.3bar	120psi/8.3bar	120psi/8.3bar	100psi/6.9bar	100psi/6.9bar
Minimum Air Pressure	85psi/5.8bar	85psi/5.8 bar	85psi/5.8bar	85psi/5.8 bar	85psi/5.8 bar
<b>WEIGHT</b>					
Single Unit	55lb/25 kg	200lb/90.7kg	200lb/90.7kg	120lb/54kg	200lb/90.7kg
Dual Unit	119lb/54 kg	520lb/235.8kg	520lb/235.8kg	—	—
Triple Unit	179lb/81kg	680lb/308kg	680lb/308kg	—	—
Quad Unit	240lb/109kg	—	—	—	—

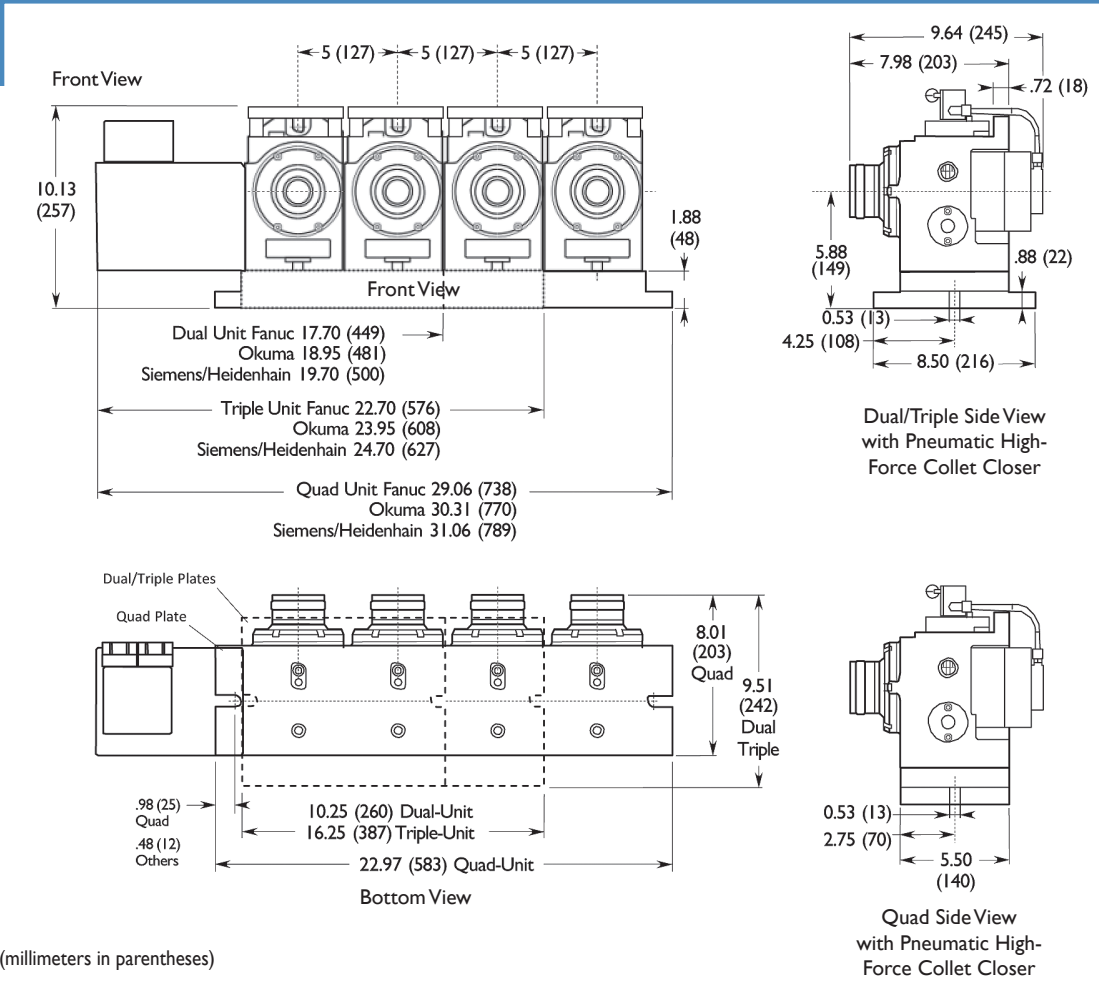
Notes: I – maximum torque applied before slipping occurs. Millimeters in parentheses.

# ROTARY DIMENSIONS

## GD5C2 Gear-Driven Indexer Dimensions

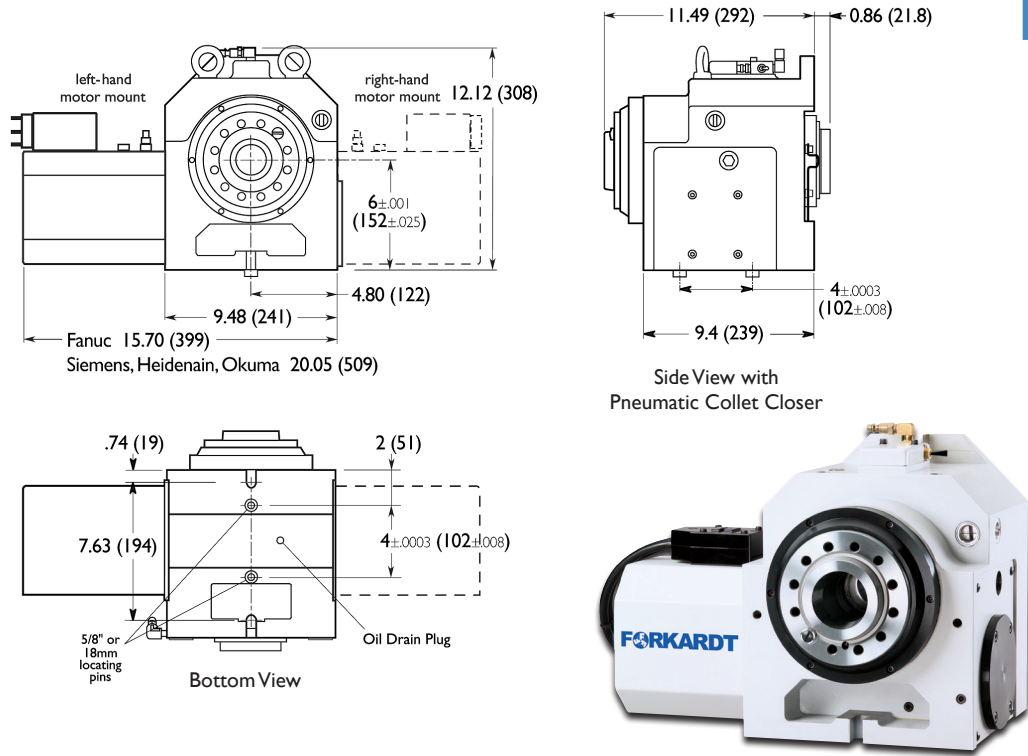


## GD5C2-02, -03 and -04 Multi-Spindle Dimensions

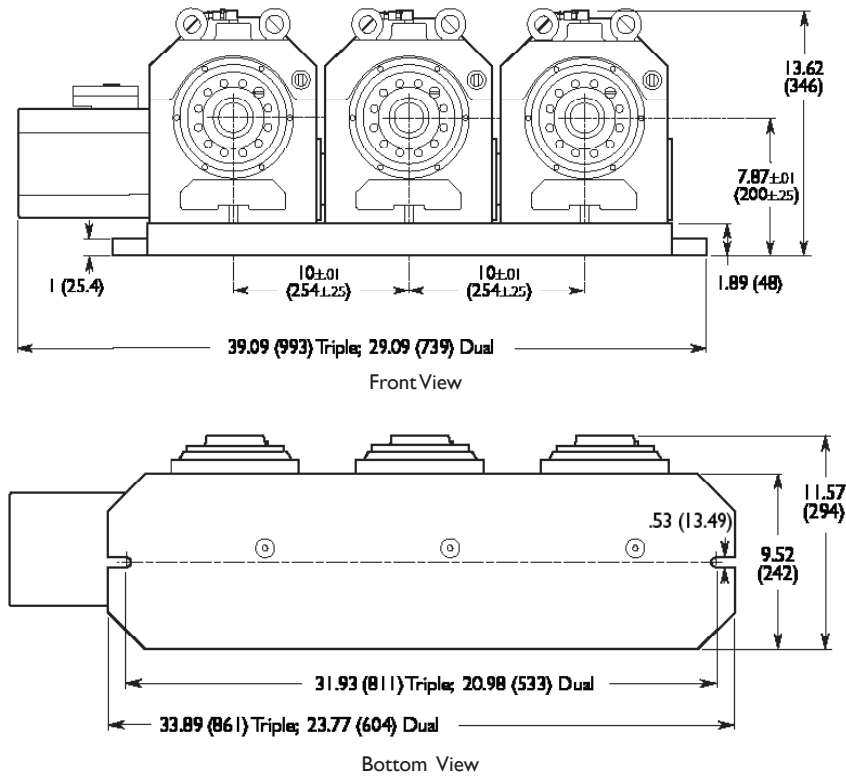


# ROTARY DIMENSIONS

## GDI6C2/GD3J2 Gear-Driven Rotary Table Dimensions



## GDI6C2-02 and -03 Multi-Spindle Dimensions

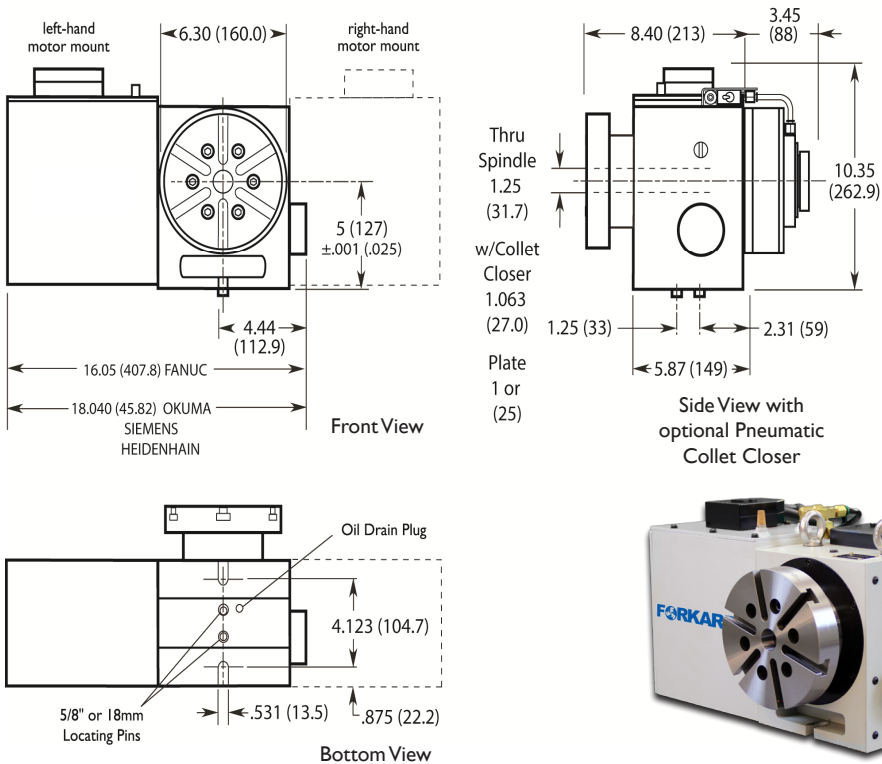


(millimeters in parentheses)

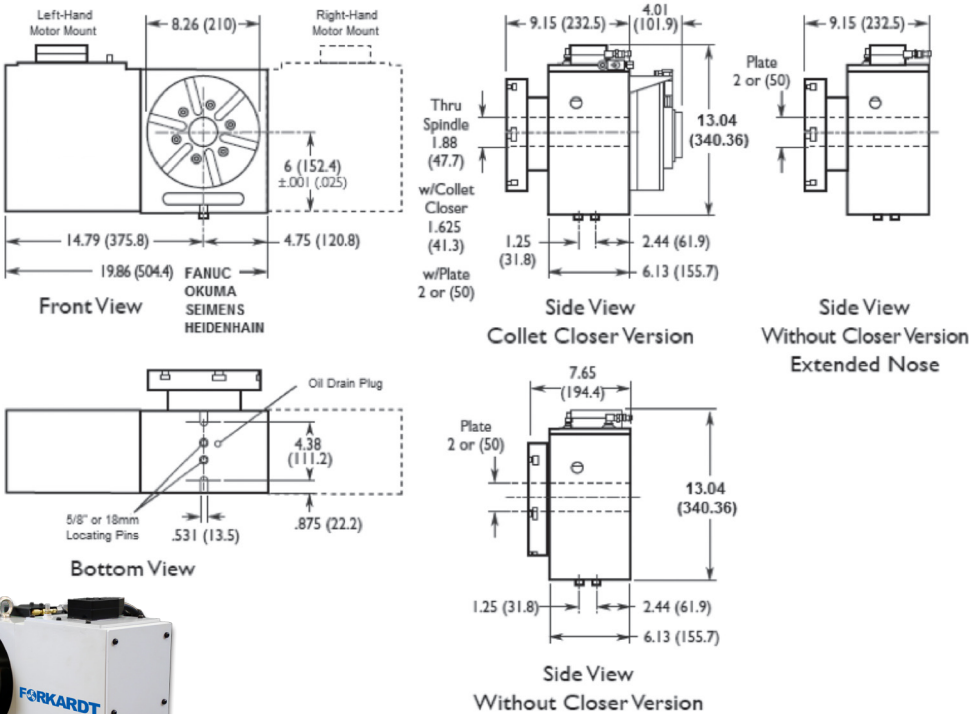


# ROTARY DIMENSIONS

## GDI60LP Gear-Driven Low-Profile Rotary Table Dimensions



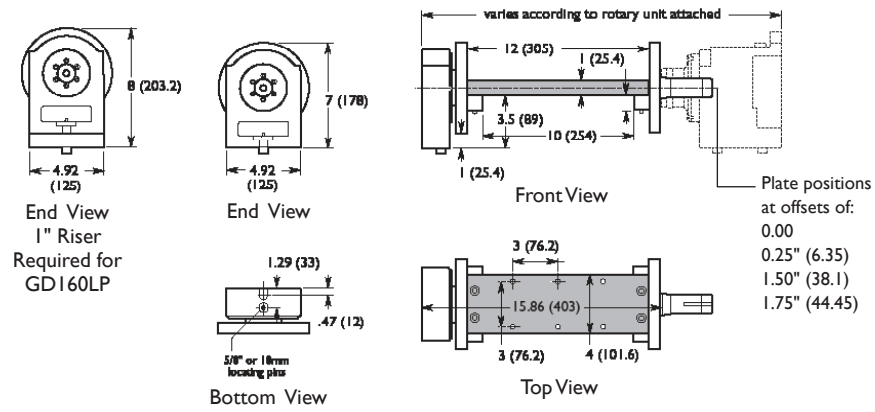
## GD210LP Gear-Driven Low-Profile Rotary Table Dimensions



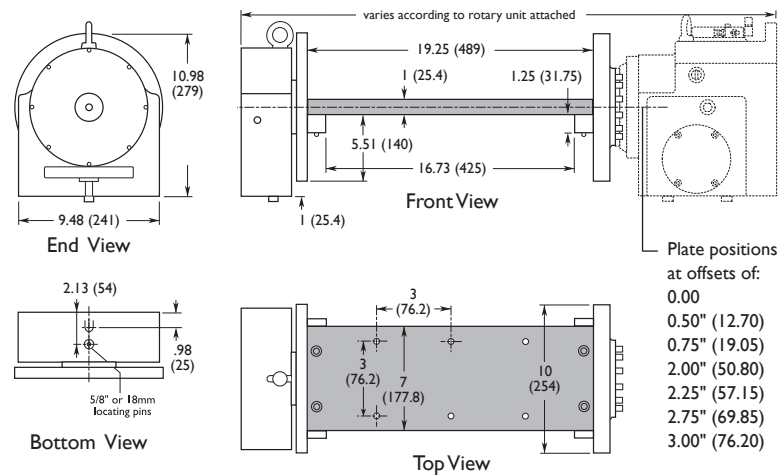
(millimeters in parentheses)

# ROTARY DIMENSIONS

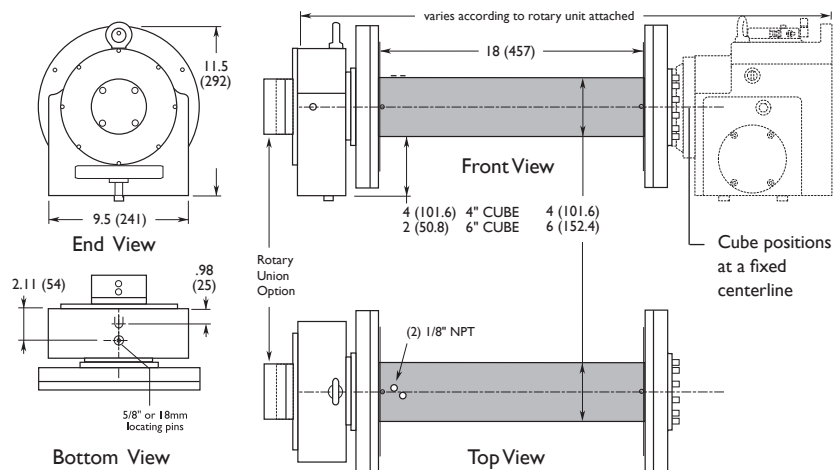
## PT5C2 Tilting Plate Trunnion for GD5C2, GD160LP – Dimensions



## PTA25 Tilting Plate Trunnion for GD16C2, GD3J2, and GD210LP Rotary Tables – Dimensions



## CTA25-4IN and CTA25-6IN 4" and 6" Cube Trunnions for GD16C2, GD210LP Rotary Tables – Dimensions

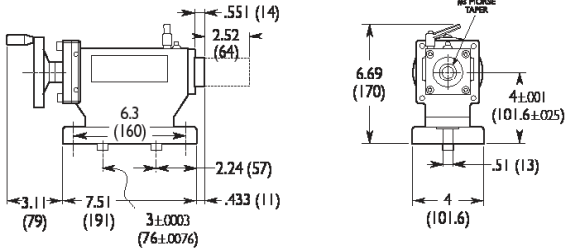


(millimeters in parentheses)

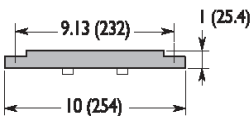
# ROTARY DIMENSIONS

## Manual Tailstock Dimensions

GD5C2



1" Tailstock Riser included for GD160LP

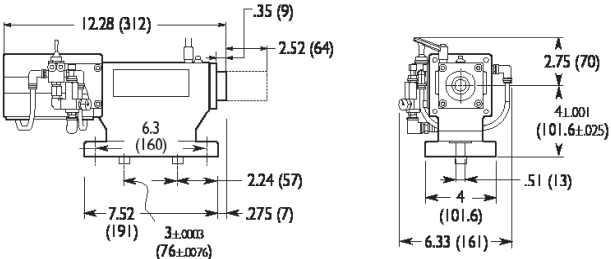


2" Tailstock Riser included for GD16C2, GD3J2 and GD210LP

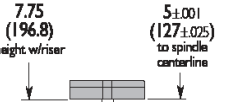
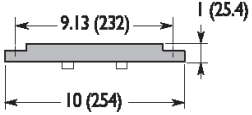


## Pneumatic Tailstock Dimensions

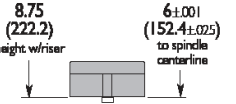
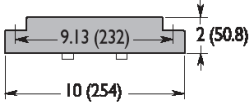
GD5C2



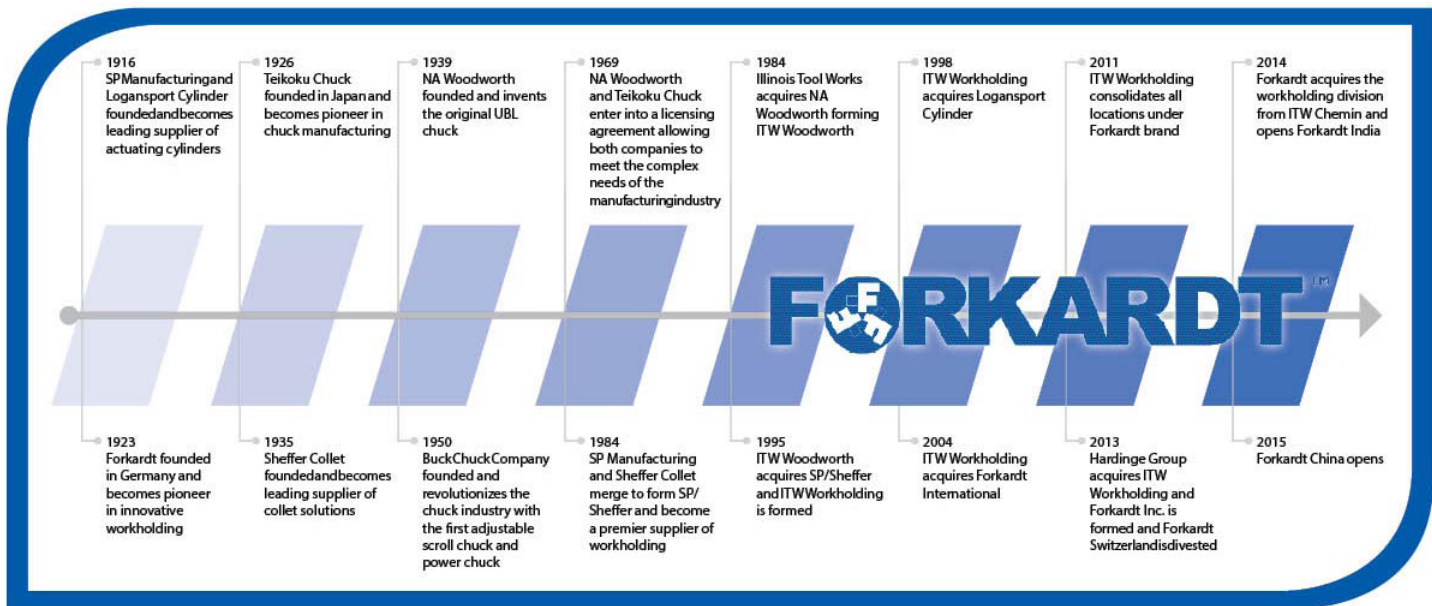
1" Tailstock Riser included for GD160LP



2" Tailstock Riser included for GD16C2, GD3J2 and GD210LP



(millimeters in parentheses)



## FORKARDT LOCATIONS

### FORKARDT USA

2155 Traversefield Drive  
Traverse City, MI 49686, USA  
Phone: (+1) 800 544-3823  
(+1) 231 995-8300  
F. (+1) 231 995-8361  
E. sales@forkardt.com

### FORKARDT GMBH

Lachenhauweg 12  
D-72766 Reutlingen  
P. (+49) 7127 58120  
F. (+49) 7127 5812-122  
E. info@forkardt.com

### FORKARDT INDIA LLP

Plot No. 39 D.No.5-5-35  
Ayyanna Ind. Park  
IE Prasanthnagar, Kukatpally  
Hyderabad - 500 072, India  
P. (+91) 40 400 20571  
F. (+91) 40 400 20576  
E. info@forkardtindia.com

### FORKARDT FRANCE S.A.R.L.

28 Avenue de Bobigny  
F-93135 Noisy le Sec Cédex  
P. (+33) 1 4183 1240  
F. (+33) 1 4840 4759  
E. forkardt.france@forkardt.com

### FORKARDT CHINA

Precision Machinery (Shanghai) Co Ltd  
1F, #45 Building, No. 209 Taigu Road,  
Waigaoqiao FTZ CHINA 200131, CHINA  
P. (+86) 21 5868 3677  
E. info@forkardt.cn.com

All specifications subject to change without notice.  
All marks indicated by ® and ™ are trademarks of  
their respective owners. #2383C • Litho in USA  
© Forkardt 2018 • January 2018

[WWW.FORKARDT.COM](http://WWW.FORKARDT.COM)