



# GH-1640ZK LATHE

This new JET GH1640-ZK lathe takes the best features of our ZX series manual lathes but scaled down with a 2" Spindle Bore which makes it perfect for Small Machine and Maintenance Shops or just about anywhere you might do turning.

The headstock gearbox is designed for quick setup of threading without any gear changes, all is done with the dials on the front of the lathe.

Equipped with a one piece casting that allows for heavy cuts without any flexing.

With a tradition of innovation and quality,
JET has maintained the confidence of our
customers for over 50 years. Whether a
Fortune 500 manufacturer or small
machine shop, we drive to develop
machines that are more efficient, last
longer, and allow you to be more productive.

EMPOWERING SHOP PERFORMANCE



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## DEPTH AND BREADTH OF LINE

- JET Offers a range of manual Belt Drive, Geared Head bench, Engine and Large Spindle Bore and CNC Lathes.
- JET will customize your lathe installing DRO's, collet closers, and taper attachments or any combination to suit your production needs.



## **OUALITY**

JET lathes are built and tested in our factories to deliver consistent quality and tolerances.



## **INNOVATIVE PRODUCTS**

- JET is committed to ongoing innovation.
- JET continues to research the needs of marketplace and bringing new products that meet those needs demonstrated with the new ZH Lathes.



## PROFESSIONAL MANUALS

JET manuals are professionally written by engineers for ease of use. All manuals come complete with parts breakdown and electrical drawings.



## INDUSTRY LEADING WARRANTY

JET offers a 2 Year Warranty; the longest warranty in the industry, confirming our confidence in the quality of our design and workmanship.





## RELIABILITY

- U.S. Customer Service
- Industry Leading Warranties



## **EXPERTISE**

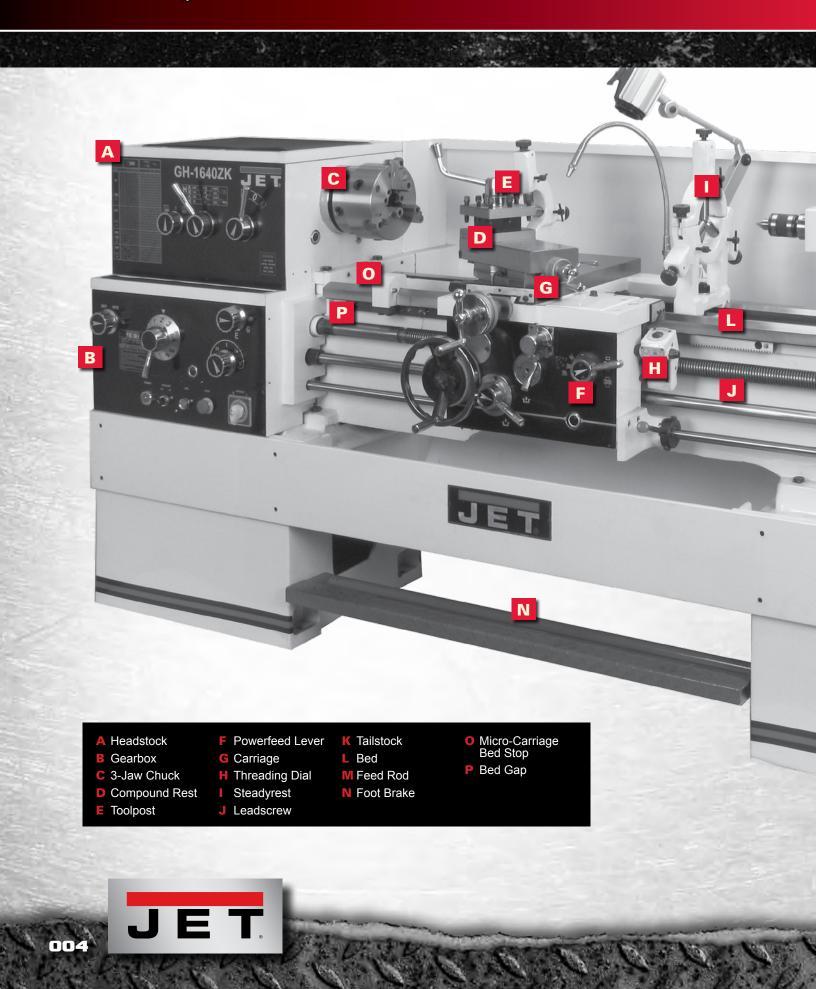
- U.S. Tech Support
- Authorized Service Centers In All 50 States



#### DEPENDABILITY

- Extensive Online Resources
- 40,000+ Unique Parts In Stock

## **TURNING OVERVIEW**



## TURNING OVERVIEW



## JET STRIVES TO MAKE YOUR JOB EASIER, BY PROVIDING YOU WITH SOME BASIC AND HELPFUL INFORMATION ON ALL OF OUR TURNING PRODUCTS.

#### **ENGINE LATHES**

The size of an engine lathe is determined by the largest piece of stock that can be machined. Before machining a workpiece, the following measurements must be considered: the diameter of the work that will swing over the bed and the length between lathe centers.

Engine lathes all have the same general functional parts; the bed is the foundation of the working parts of the lathe. The main feature of its construction is the ways which are formed on its upper surface and run the full length of the bed. Ways provide the means for holding the **tailstock** and **carriage**, which slide along the ways, in alignment with the permanently attached **headstock**.

The **headstock** is located on the operator's left end of the lathe bed. It contains the main spindle and oil reservoir and the gearing mechanism for obtaining various spindle speeds and for transmitting power to the feeding and threading mechanism. The headstock is driven by an electric motor connected either to a belt, pulley or geared system. The spindle has a hole through its entire length to accommodate long workpieces.

The **tailstock** is located on the opposite end of the lathe from the headstock. It supports one end of the workpiece when machining between centers, supports long pieces held in the chuck, and holds various forms of cutting tools such as drills, reamers and taps.

The **carriage** includes the apron, saddle, compound rest, cross slide, **tool post** and the cutting tool. It sits across the ways and in front of the bed. The function of the carriage is to carry and move the cutting tool. It can be moved by hand or power and can be clamped into position with a locking nut. The saddle carries the cross slide and the compound rest.

Balance...The cross slide is mounted on the ways on top of the saddle and is moved back and forth at 90 degrees to the axis of the lathe by the cross slide lead screw. The lead screw can be hand or power activated. A feed reversing lever, located on the carriage or headstock, can be used to cause the carriage and the cross slide to reverse the direction of travel. The compound rest is mounted on the cross slide and can swiveled and clamped at any angle in a horizontal plane. The cutting tool and tool holder are secured in the tool post which is mounted directly to the compound rest. The apron contains the gears and feed clutches which transmits motion and feed rod or lead screw to the carriage and cross slide.

TURNING

## **GH-1640ZK FEATURES**

#### **FEATURES**

- Chrome-molybdenum headstock gears are hardened, ground and shaved
- Universal gearbox allows inch, metric, diametral and module pitch threads without changing gears
- High quality ANSI Class 50 wear resistant cast iron bed-ways are hardened and ground
- Removable gap allows up to 20-7/8" diameter work
- Attractive chrome control levers, dials and knobs complete this impressive package
- D1-6 spindle is precision ground for accuracy and supported by high quality spindle bearings
- Large easy to use foot brake

## STANDARD EQUIPMENT

- 6" 3-Jaw Direct Mount Scroll chuck with reversing jaws
- 8" 4-Jaw Chuck
- Steady Rest
- Follow Rest
- Face Plate
- 4-Way Tool Post
- Micro-carriage bed stops
- Coolant System
- Full Length Splash Guard
- Halogen Work lamp







Complete with 4-Way Tool Post and 3-Jaw Chuck Mounted for Ease of Use



## **CH-1640ZK SPECIFICATIONS**



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Easy to Use Foot Brake

STOCK NUMBER	321850	
Max. swing over bed (in.)	16	
Max. swing over cross slide (in)	7-5/8	
Swing Through Gap (metric)	20-7/8	
Length of Gap (in)	7-7/8	
Distance between Centers (in)	40	
Hole Through Spindle (in)	2	
Spindle Mount (in)	D1-6	
Spindle Taper (With sleeve)	MT-6(MT-4)	
Number of Spindle Speeds	12	
Range of Spindle Speeds (RPM)	42-1,800	
Number of Longitudinal/Cross Feeds	122	
Range of Longitudinal Feeds (Inch/rev)	.00150913	
Range of Cross Feeds (Inch/rev)	.00060365	
Number of Inch Threads	61	
Range of Inch Threads	1-5/8-72 TPI	
Number of Metric Threads	24	
Range of Metric Threads (mm)	0.5-20	
Max.Tool Size (in)	25/32 x 25/32	
Max. Compound Slide Travel	3-5/16	
Max.Cross Slide Travel	8-1/4	
Max. Carriage Travel	39	
Tailstock Spindle Travel (metric)	4-3/4	
Taper in Tailstock Spindle	MT-4	
Steady Rest Capacity	7/16 - 3-15/16	
Follow Rest Capacity	1/2 -3-1/8	
Width of Bed (metric)	12-1/4	
Overall Dimensions (LxWxH/Inch)	94x39-5/16x48-5/8	
Coolant Pump System	1/8HP	
Main Motor	2 Speed High 7-1/2HP Low 5HP	
Prewired	230V	
Net Weight (lbs)	3877	

## **ACCESSORIES: DIGITAL READOUTS**



JET will install the DRO of your choice. You can add a 2-Axis DRO from either Acu-Rite or Newall. We can also install a taper attachment! Add a set of 5-C collets to make your turning job easier.

## **200**\$

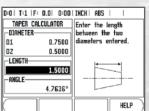
As the industry standard in digital readout systems, the Acu-Rite 200S offers state-of-the-art features for milling, turning and grinding applications.

#### **Common Features**

- 2 or 3 axis 5.7" Transmissive LCD display
- Job Clock
- Feed Rate Display
- Multiple Language Support
- Absolute/Incremental
- Near-Zero Warning
- Help Function
- **Turning Specific Features**
- Lock axis feature
- Instant radius/diameter conversion

- 16 Tool Offsets/Diameter
- Preset and zero reset
- 4 Function Calculator/Trig Calculator
- Instant Inch/mm conversion
- Position-Trac™ Home Reference
- Taper Calculator
- CSS (option)







## 3005

The Acu-Rite 300S is a fully programmable 4 axis readout system, now available with a full color display. With the capability to store and create a library of programs the 300S is everything you need to create, edit and execute programs on your manual machine tool.

#### **Common Features**

- 2, 3 or 4 axis 5.7" Full Color Display
- Multiple program names with numerous steps
- Multiple display views
- Job Clock
- Feed Rate Display
- Multiple Language Support
- Absolute/Incremental
- Near-Zero Warning

## **Turning Specific Features**

- Lock axis feature
- Instant radius/diameter conversion

- Help Function
- 16 Tool Offsets/Diameter
- Preset and zero reset
- 4 Function Calculator/Trig Calculator
- Instant Inch/mm conversion
- Position-Trac™ Home Reference

Taper Calculator





## **5-C COLLET SETS & RACKS**

- Precision hardened and ground
- C Collets for use on lathes
- Premium collets with 0.0005mm T.I.R.

STOCK NUMBER	DESCRIPTION	
650014	CS-5C 16 pcs 5-C collet set 1/8" to 1 1/16" by 1/16th	
650015	18 pc Premium 5C collet set 1/16" to 1-1/8" by 16th with Metal Rack	
650016	35 pc Premium 5C collet set 1/16" to 1-1/8" by 32nds with Metal Rack	
650017	Metal collet rack holds 30 5C collets	
650018	Metal collet rack holds 72 5C collets	













## **ACCESSORIES: DIGITAL READOUTS**

## DP700

The DP700 is the latest in Newall's line of a powerful and intuitive DROs. The unit is housed in a rugged, ergonomically designed casting. The DRO features all of the essential functions for milling, boring, turning, grinding, and general machining operations.

#### **Common Features**

- Clean, Crisp, Easy to Read, LEDs
- Intuitive Message Window
- Long Life Membrane Keypad
- Solid cast construction
- Safe, Low Voltage Power Supply (UL)
- Panel Mount Version Available
- Feed Rate Display
- Bolt Hole Circle Routine
- Line Hole Routine
- Arc Contouring

- Programmable Memory/Teach
- Polar Coordinates
- Line Hole Calculator
- Tool Offsets
- Taper Calculations
- Axis Vectoring/Summing
- Linear and Segmented Error Comp.
- Undo
- RS232 Output
- Languages: English, French, German, Spanish, Italian, Turkish, Czech, Russian, Portuguese, Danish

The DP700 is compatible with Newall's Spherosyn and Microsyn encoders which withstand the harshest shop conditions.

## DP900

Setting new performance standards, the DP900 integrates the latest innovations in electronic design, housed in a rugged diecast chassis. The feather-touch keypad ensures long life and stability throughout the rugged shop environment. The DRO offers flexible features tailored for milling or turning applications. Plus, with the use of a touch probe, part inspection calculations can be performed without removing the part from the machine.

#### **Common Features**

- Rugged Die-Cast Chassis
- Feather-Touch, Cap-Sense Keypad
- 5.7" QVGA Blue STN with CCFL Backlight
- 2, 3, or 4 Axis with Optional Rotary Axis
- Graphical Tool Path Verification
- Customized Canned Cycles
- Remote Storage via USB Port
- CMM / Inspection Functions with Probe Capabilities
- Feed Rate Display
- Polar Co-ordinate Readings
- Touch Probe Input
- Teach Mode with Graphics

#### **Turning Specific Features**

- Taper Calculation
- Vectoring
- Tool Offsets (99)
- Axis Summing
- Radius / Diameter Readings

# **NEWALL**





## **MARKET SEGMENTS - KEY END USERS**



**Tool and Die Shops** 



**Maintenance Operations** 



**Machine Shops** 



**Production Floor** 



**Military Bases** 



Customized Automotive & Motorcycle Industry

## **Machine Specifiers**

The following are the key buying contacts of standard machine tools.

- Company management/owners
- Plant & production management
- Design & research engineering
- Tool room manager/foreman
- Maintenance & facility management
- Production / Industrial engineering Purchasing
- Quality control management
- Tool crib

JET Lathes are designed, engineered and built with our customers in mind. With increased productivity, efficiency and reliability, you will see a quick return on your investment.



