



TOOLROOM LATHES

CIRCULARITY ACCURACY

to .00125mm (50 millions of an inch)

Designed, Engineered, and Manufactured
to the Highest Accuracy Standards!

CT618CNC



Features

- Circular Accuracy to 0.00125 mm (50 millionths of an inch)
- Hardened and precision ground alloy steel bed ways resist wear
- Turcite-B slideway bearing surface between carriage and bed
- FANUC CNC Controller (Standard)
- Powerful 3 HP (5 HP is optional) motor with Yaskawa current vector inverter drive for improved torque response at low end
- Spindle mounted on high precision preloaded angular contact ball bearings
- Precision ballscrew on X, Z axes
- Protection guard on X, Z axis ballscrews
- X, Z axes feeds driven by AC Servo Motor
- Z axis ballscrews directly coupled to AC Servo Motor minimize backlash
- Fast lever collect chucking
- Optional power collet closer
- Gang tooling option
- Wide variety of accessories to increase versatility

MODEL	CT618CNC	CT618CNC/5
Maximum Swing	14.96" (380mm)	14.96" (380mm)
Maximum Turning Diameter	5.9" (150mm)	5.9" (150mm)
Distance Between Centers	17.99" (457mm)	17.99" (457mm)
Bar Stock Diameter (5C Collet)	1-1/16 (27mm)	1-1/16 (27mm)
Hole Through Spindle	1-1/4" (31.75mm)	1-1/4" (31.75mm)
CNC Control	Fanuc	Fanuc
Spindle Speeds (Variable)	50-4000 RPM	50-6000 RPM
Spindle Nose I.D. / O.D.	5C (10 deg) / 4 deg Taper	5C (10 deg) / 4 deg Taper
Chuck Diameter	6" (150mm)	6" (150mm)
Maximum X Axis Travel	8.66" (220mm)	8.66" (220mm)
Maximum Z Axis Travel	13.38" (340mm)	13.38" (340mm)
Rapid Travers	787.4 in/min (20M/min)	787.4 in/min (20M/min)
Inverter Spindle Motor	3 HP	5Hp
X, Z Axis Servo Motor	X: beta 2, Z: beta2	X: beta 2, Z: beta2
Coolant Pump	1/4 HP	1/4 HP
Tailstock Quill Taper	MT#2	MT#2
Tailstock Quill Travel	3.74" (95mm)	3.74" (95mm)
Machine Dimensions	81"x40"x65" (2050x1000x1650mm)	81"x40"x65" (2050x1000x1650mm)
Machine Weight	2640 lbs (1200kg)	2640 lbs (1200kg)
Shipping Dimensions	95"x55"x75" (2413x1397x1905mm)	95"x55"x75" (2413x1397x1905mm)
Shipping Weight	2975 lbs (1350kg)	2975 lbs (1350kg)

All specifications subject to change without notice or obligation.

CT618CNC

GANG TOOL TURNING NOW AVAILABLE ON CT618CNC (Gang Tool Block Center Height 12 mm)



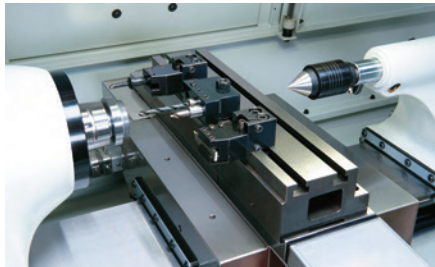
Bare cross slide with precision locator holes for custom applications.



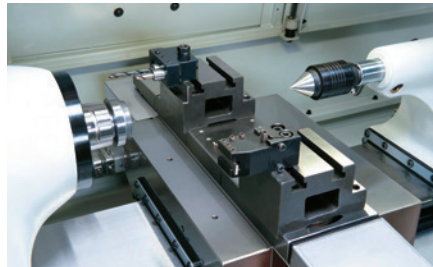
Quick change tool holder on tool block.



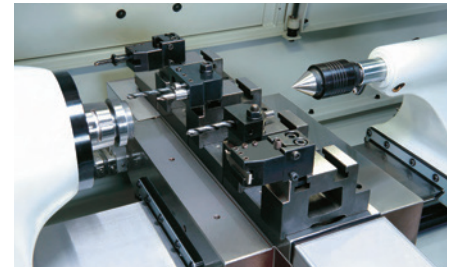
Lathe center in tailstock single tool on quick change tool holder on compound slide.



One full length gang tool block with T-slots to accommodate different kinds of tool holders.



Two "shorty" gang tool blocks leave room in the middle for longshaft work with the tailstock.



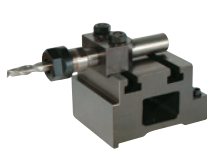
Multiple "single" gang tool blocks each holding a single tool holder.

CT618CNC toolroom lathe brings you two different styles of machining capabilities.

CT618CNC is the NC upgrade from the **CT618VS** manual toolroom lathe. It keeps the original machine's durability and elegant exterior while automating it with servos and CNC control. With the **CT618CNC's** redesign we go even further. The ability to use a tailstock and lathe center to perform shaft work is maintained, but more importantly, an innovative tool plate design adds the capability to remove the compound tool post and swap in a T-slot gang tool slide in its place. The gang tool slide works great with a completely new line-up of tool holders from Clausing for gang tool turning. The traditional lathe tooling setup and gangtool setup are easy to take out and exchange one for the other. The **CT618CNC** is the one CNC toolroom lathe that now brings you two different styles of machining capabilities in one machine.



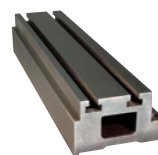
Tool Block for Quick Change Toolpost



ER Collet Holder



Square Shank Tool Holder, Right Hand



Gang Tool Block 408 mm



Gang Tool Block 96 mm



Gang Tool Block 48 mm



Square Shank Tool Holder, Left Hand



Square Shank Tool Holder, Right Hand



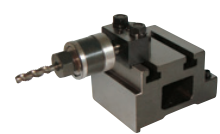
Round Shank Tool Holder, 1 Position



Drill Holder, Adjustable Center



Releasing Die Nut Holder



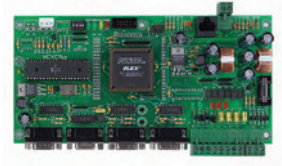
Tap Holder

CT618DT

With integrated
DRO Functions



Monitor 5.7" or 7"



CPU designed specifically for fast, reliable controls. Interface display monitor.

Features

- Flat panel LCD display shows spindle RPM and tool feed rate to let operator easily select best turning conditions
- LCD displays electric current value to easily check for turning overload
- Rapid retract function shortens threading cycle
- Circular Accuracy to 0.00125 mm (50 millionths of an inch)
- Infinitely variable spindle speed from 50–4000 RPM
- Full bearing carriage with Turcite-B coated slideway bearing material between carriage and bed
- Fast lever collet chucking with one single movement
- The spindle is mounted on high precision preloaded angular contact ball bearings eliminating radial and end play
- Solid hardened and ground alloy tool steel bed
- Powerful 3 HP motor with current vector inverter drive increases low end torque (optional 5 HP 50–6000 RPM)

What is Digital Threading Control?

CT618DT toolroom lathe with Digital Threading Control replaces traditional threading gearboxes with microprocessor-controlled, servo-driven leadscrew. In the past, when a machinist was faced with a workpiece that called for thread pitch not supported on a conventional lathe, he had to locate and order a custom gear set and take the time to swap out the gears in the gearbox. This is not economically justifiable unless the volume is large enough. **CT618DT** toolroom lathe's design eliminates this time-consuming process. With the new digital threading system, the user's threading wishes can be easily and immediately realized. Simply type in the desired thread pitch on the numeric keypad on the touch screen LCD control panel and then start the threading cycle as on other conventional lathes. **CT618DT**'s system controls and synchronizes main spindle rotation and Z-axis feed rate to produce a precise threading cycle for the given TPI or mm thread pitch. Besides being able to cut thread pitches not previously available on manual lathes, noise and vibration are significantly reduced because there are actually no gears in the gearbox. Since **CT618DT** already has a custom IC and an LCD panel to enable threading control, the next logical step is to integrate DRO functions for an all-in-one versatile machine. The **CT618DT** has in fact done that. DRO capabilities are built-in and come standard with no extra charge. **CT618DT** features linear scales on the X and Z axes from Mitutoyo. For people experienced with the super high precision of Clausing's toolroom lathes, the **CT618DT** adds another dimension of capabilities. It builds on the same foundation as the **CT618VS** toolroom lathe. They are all ideal for super high precision lathe work on small parts (usually those that fit in 5C collets).

CT618VS



Control Panel

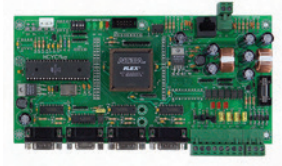
Features

- Spindle run out within 0.00125 mm (50 millionths of an inch)
- Hardened and precision ground spindle mounted on high-precision preloaded angular contact ball bearings maximizes rigidity and sustained precision
- Infinitely variable spindle speed provides desired speed on demand
- VS model has 3 HP motor with current vector inverter drive for increased low end torque
- Fast lever collet closer allows chucking with one single movement
- Independent electric variable feeds for carriage and cross slide provide freedom of operation
- Hardened and precision ground alloy steel bed ways resist wear
- Turcite-B slideway bearing surface between carriage and bed
- Inch / Metric quick change gearbox
- Inch / Metric dual dial and quick action compound slide for threading
- Automatic thread length control

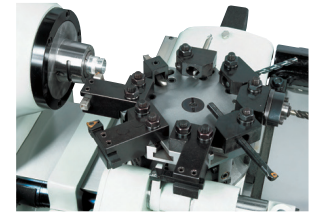
CT618VSR



Monitor 5.7" or 7"



CPU designed specifically for fast, reliable controls. Interface display monitor.



Center Height 12mm

Digital threading makes threading on a chucker lathe easier than ever and provides touchscreen LCD to select thread pitch. Choose target TPI or mm pitch on the screen, set spindle rpm and start threading just like on conventional lathes. Simple no threading attachment. No threading gearbox. Less moving parts, quiet operation, maintenance free design. Servo driven design. An internal, servo motor drives the leadscrew so the feed rate is synchronized to spindle rpm.

Features

- Spindle run out within 0.00125 mm (50 millionths of an inch)
- Hardened and precision ground spindle with 5C collet spindle nose
- Spindle mounted on high precision preloaded angular contact ball bearings
- Eight station turret with preloaded ball bearing
- Turcite-B coated slideway bearing surface between carriage and bed
- Hardened and precision ground alloy steel bed way
- Fast lever collet chucking with a single movement
- Eight-position carriage stop
- Powerful 3 HP motor with current vector inverter drive increases low end torque 50-4000 RPM. Optional 5 HP Motor 50-6000 RPM



Straight and Taper Turning Slide for Double Tool Cross Slide



Quick Change Adjustable Tool Holder



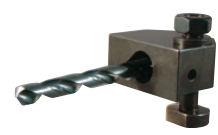
Quick Acting Recessing Tool



Knee Tool



Slide Tool



Boring Tool Holder



Centering and Facing Tool



Releasing Tap Holder



Tool Holder Extension



Adjustable Rotary Stops



Adjustable Tool Holder



Releasing Tap Holder

CT618VST

Features

- High/Low Speed Quick Change Lever for Convenience
- Screw Feed Tailstock
- Double Tool Cross Slide for Many Practical Applications
- 229 mm (9") swing over bed
- The spindle is mounted in high precision preloaded angular contact ball bearings eliminating radial and end play
- Fast lever collet chucking with a single movement
- Variable spindle speeds 50–4000 RPM
- Solid hardened and ground alloy tool steel bed ways
- The preloaded ball bearing turret head eliminates all play between the turret head and the turret slide
- Powerful 3 HP frequency controlled motor



Six-Station Turret



CT618

Features

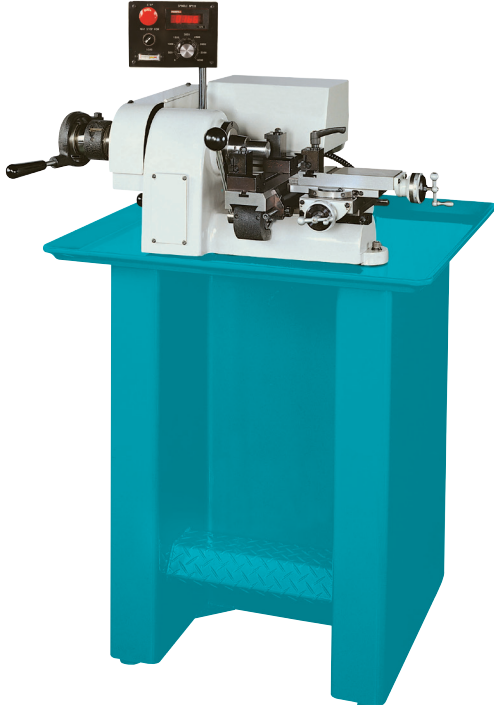
- High/Low Speed Quick Change Lever for Convenience
- Screw Feed Tailstock
- X, Z Axis Compound Slide
- Designed to Machine Precision Small Diameter Parts
- High Performance Machining of Shafts
- Chucking or Collet Hold Workpiece
- 229 mm (9") swing over bed
- The spindle is mounted in high precision preloaded angular contact ball bearings eliminating radial and end play
- Fast lever collet chucking with a single movement
- Variable spindle speeds 50–4000 RPM.
- Solid hardened and ground alloy tool steel bed ways
- Powerful 3 HP frequency controlled motor



Control Panel



CT618FL



Marker

Features

- A compact machine with proven design
- Superior surface finish
- 229mm (9") swing over bed
- 27mm (1-1/16") 5C collet capacity
- Fast lever collet chucking
- Hardened and precision ground alloy tool steel bed ways 229mm (9") length
- Preloaded angular contact ball bearing spindle
- Spindle speeds 50–4000 RPM
- Quick change spindle speeds
- 1 HP frequency controlled motor

Spindle tooling, tooling holder and optional equipment for Clausing high speed, high accuracy toolroom lathe.



Expanding Collet



Vacuum Chuck



Hydraulic Chuck



Chuck Back Plate



6" 3-Jaw Chuck



Lathe Dog



Face Plate



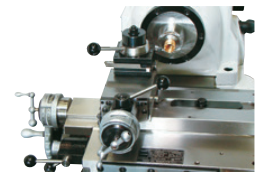
Pneumatic Chuck



Precision Diaphragm Chucks



Step Chuck



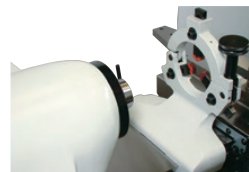
Four Station Turret



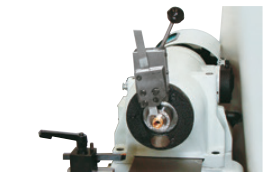
Step Chuck



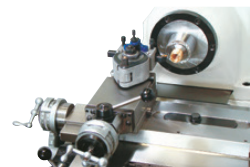
Follow Rest



Steady Rest



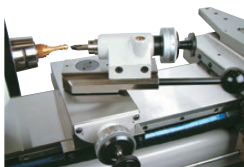
Vertical Cut-Off Slide



Quick Change Tool



Indicator Carriage Stop



Radius Turning Attachment



Taper Turning Attachment



Rear Tool Holder Slide Assembly

SPECIFICATIONS

MODEL	CT618DT / CT618VS	CT618VST / CT618	CT618VSR	CT618FL	
Spindle Capacity	With Chuck	6" (150mm)	6" (150mm)	6" (150mm)	6" (150mm)
	With Expanding Collets	3" (76mm)	3" (76mm)	3" (76mm)	3" (76mm)
	With Round 5C Collets	1-1/16" (27mm)	1-1/16" (27mm)	1-1/16" (27mm)	1-1/16" (27mm)
	With Hexagon 5C Collets	7/8" (22mm)	7/8" (22mm)	7/8" (22mm)	7/8" (22mm)
	With Square 5C Collets	3/4" (19mm)	3/4" (19mm)	3/4" (19mm)	3/4" (19mm)
	With Step Chuck	1-1/16 – 6" (27 – 152mm)	1-1/16 – 6" (27 – 152mm)	1-1/16 – 6" (27 – 152mm)	1-1/16 – 6" (27 – 152mm)
Spindle Nose Diameter	2.18" (55.5mm)	2.18" (55.5mm)	2.18" (55.5mm)	2.18" (55.5mm)	
Spindle Nose I.D. / O.D.	5C (10°) / 4° Taper	5C (10°) / 4° Taper	5C (10°) / 4° Taper	5C (10°) / 4° Taper	
Spindle Speeds (Variable)	50 – 4000 RPM	50 – 4000 RPM	50 – 4000 RPM	50 – 4000 RPM	
Inverter Spindle Motor	3HP (Optional 5HP)	3HP	3HP 3HP (Optional 5HP)	1HP	
Hole Through Spindle	1-1/4" (31.75mm)	1-1/4" (31.75mm)	1-1/4" (31.75mm)	1-1/4" (31.75mm)	
Bar Stock Diameter (5C Collet)	1-1/16" (27mm)	1-1/16" (27mm)	1-1/16" (27mm)	1-1/16" (27mm)	
Distance Between Centers	17.99" (457mm)	CT618 = 14.9" (380mm) CT618VST — No TS	No Tailstock	No Tailstock	
Swing Over Bed	11" (280mm)	9" (229mm)	13" (330mm)	9" (229mm)	
Swing Over Carriage	9.05" (230mm)	—	—	—	
Swing Over Cross Slide	5.98" (152mm)	—	—	—	
Carriage Power Feed Range (Variable)	.314 – 7.0 in/min (8 – 178 mm/min)	.236 – 9.8 in/min (6 – 250 mm/min)	.236 – 9.8 in/min (6 – 250 mm/min)	—	
Cross Slide Power Feed Range (Variable)	.196 – 4.0 in/min (5 – 102 mm/min)	—	.354 – 6.3 in/min (9 – 160 mm)	—	
Cross Slide Travel	5.98" (152mm)	CT618=3.7" (95mm) CT618VST=N/A	4.48" (114mm)	—	
Quick Action Compound Slide Travel	.098" (2.5mm)	—	—	—	
Compound Slide Travel	2.99" (76mm)	X: 4.48" (114mm) Z: 5.5" (140mm)	—	Optional X: 4.48" (114mm) Z: 5.5" (140mm)	
Coolant Pump	1/8 HP	1/8 HP	1/8 HP	Optional	
Feed Inverter	1/2 HP	—	1/2 HP	—	
Tailstock Quill Travel	3.7" (95mm)	3.7" (95mm)	No Tailstock	No Tailstock	
Range of Threads	CT618DT= 3.175 – 500 TPI (.05 – 6.55 mm) CT618VS= 11 – 108 TPI (.275 – 2.7mm)	—	3.175 – 500 TPI (.05 – 6.55mm)	—	
Machine Dimensions	73"x30"x67"	69"x28"x63"	73"x30"x67"	36"x36"x55"	
Machine Weight	2200 lbs	1364 lbs	2320 lbs	820 lbs	
Shipping Dimensions	83"x40"x77"	79"x38"x73"	83"x40"x77"	46"x46"x65"	
Shipping Weight	2600 lbs	1764 lbs	2720 lbs	1120 lbs	

All specifications subject to change without notice or obligation.

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