



**Your Total Solution
For CNC Machine Tools**

For nearly a 100 years, Clausing has been a leader in the Metalworking Industry. Today, Clausing offers the best valued and technologically advanced CNC Machine Tools available in the market place...



TORNADO Advanced Turning Technology

Tornado CNC Turning Centers provide greater consistency and accuracy because they are built using Colchester-Harrison's unique "Duo-Stable" advanced machine tool construction which provides thermal and dynamic stability up to 300% greater than cast iron.



Automated Turning

TORNADO turning centers can be configured with work scheduling and tool management to provide true 24-7 unmanned automation



2-Axes Turning

The ideal machines for producing two axis parts.

- Small footprint
- Patented Duo-Stable construction

3-Axes Turning & Milling

Have a fully programmable 'C' axis and power driven tools for radial and axial milling, drilling, boring and tapping.

5-Axes Sub Spindle Turning

Enables the full benefit of 'single-hit' machining. By transferring the work piece to the sub-spindle for additional turning and milling, all six sides of a component can be machined in a single set-up.

6-Axes Y Axis Machining

The addition of the Y-axis allows you to take full advantage of the machine's milling capability by providing "off center line" machining. Y-axis travels of $\pm 1.57"$ (40mm) are available



ALPHA The Ultimate CNC Combination Lathes

The Alpha Series – offers the widest variety of control levels from manual through full ISO on one machine. Tailored to optimize the skill level of the machine operator, the Alpha Series offers a large machine envelope for the efficient production of a wide variety of components in small to medium size batches.



ALPHAXT

The Alpha XT comes with the latest FANUC Oi Mate-TC control coupled with the Turnmate i conversational programming package.

ALPHAMT

The Alpha MT is equipped with the latest generation FANUC Oi TC control with Manual Guide i, ideal for first time CNC users.

ALPHAXS

The XS offers the new generation FANUC 21i TB control with touch screen, Manual Guide i and custom software systems.

ALPHAXM

The Alpha XM has all the features of the XS with the additional capacity for high precision full C - axis milling as well as turning.

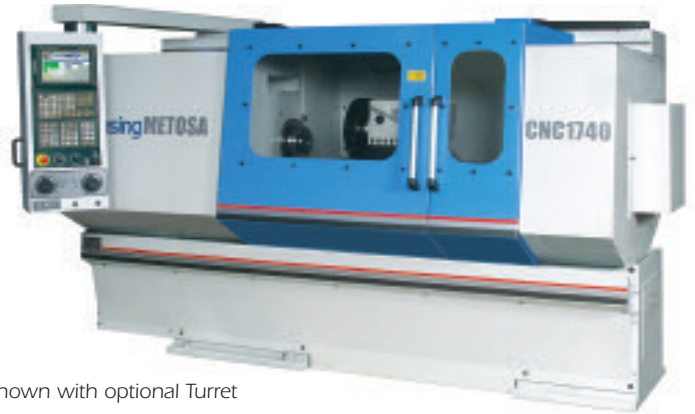
SmartLathe^{II} CNC Lathes



The Clausing/Metosa **SmartLathe^{II}** is equipped with the latest G.E. Fanuc Oi Mate-TC Control with Fanuc TurnMate *i* conversational programming system and full CNC G-code programming and over 200 standard features including Custom Macro B, Rigid Tapping and 256K Part Programming Memory.

- The operation cycle is selected using graphic icons on the touch screen
- Manual operation is easy with the use of the electronic hand wheels for the X and Z axes. Travel limits are shown on the touch screen
- Up to 24" swing and 120" center distance, 24" swing models available with 6.1" spindle bore
- Horizontal 4-way indexing power Turret
- Heavy-duty construction with cast iron base
- Carriage cross slides and bed ways are hardened and ground for long life and high-speed positioning accuracy

Clausing **METOSA** CNC Lathes



Shown with optional Turret

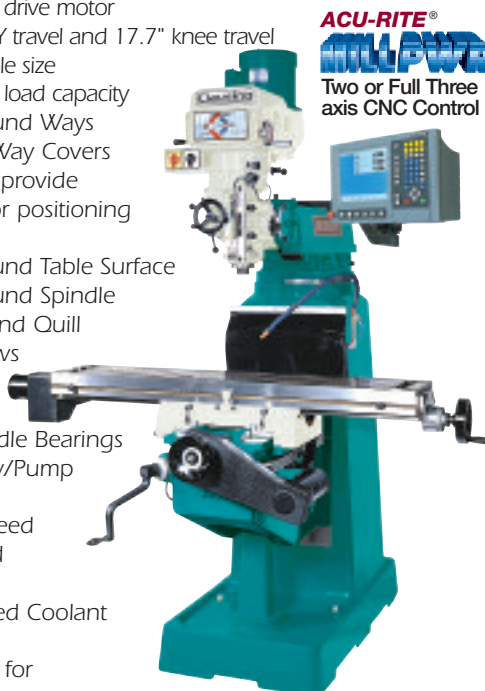
Equipped the 'new generation' GE Fanuc 21*i* T CNC Control with 'Manual Guide' software. The 21*i* T control allows the operator to generate part programs quickly and efficiently through easy to understand conversational style cycle prompts.

- Up to 24" swing and 80" center distance
- Heavy-duty construction with cast iron base
- Carriage cross slides and bed ways are hardened and ground for long life and high-speed positioning accuracy
- The special headstock design guarantees quiet operation, a high chip removal rate and excellent quality finish on machined pieces
- An innovative, highly advanced system of automatic speed change ranges
- Maintenance free AC motors used to drive the main spindle and screws
- Automatic lubrication of all slideways and moving parts
- Completely enclosed guarding allowing a high rate of chip removal

Clausing CNC Vertical Knee Mills

Affordable 2 or 3 axes CNC Vertical Mill with features found on higher priced machines.

- Infinitely variable spindle speeds (60-4300 rpm)
- Precision ground and hardened ballscrews
- Up to 5 Hp spindle drive motor
- Up to 33" x 16" X, Y travel and 17.7" knee travel
- Up to 10" x 54" table size
- Up to 990 lbs table load capacity
- Hardened & Ground Ways
- Column & Knee Way Covers
- Ground T-slots to provide reference edge for positioning workpiece
- Hardened & Ground Table Surface
- Hardened & Ground Spindle
- Chromed & Ground Quill
- Ground Ball Screws & Chromed Motor Shaft
- ABEC 7/CP4 Spindle Bearings
- Coolant System w/Pump & Switch
- Chromed Cross Feed Screw Covers and One-piece Wiper
- Flexible Segmented Coolant Nozzle
- Articulating Head for Compound Angles

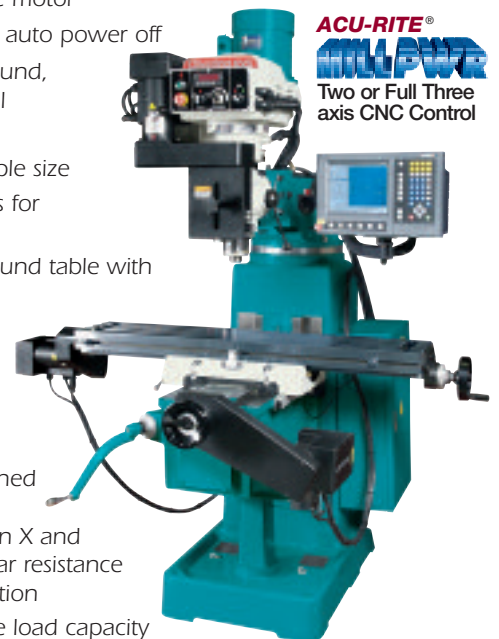


ACU-RITE[®]
MILLPWR
Two or Full Three
axis CNC Control

Clausing CNC EVS Knee Mills

Electronic Variable Speed (EVS) CNC Milling Machines

- Manual operation with DRO, semi-automatic operation or two or three axes CNC operation
- Totally enclosed electrics with Yaskawa A.C. inverter variable speed drive
- Up to 4 Hp spindle motor
- Spindle brake with auto power off
- Hardened and ground, chrome plated quill
- Coolant system
- Up to 11" x 58" table size
- Meehanite castings for superior rigidity
- Hardened and ground table with 3 ground T-slots
- Up to 35.5" X axis travel, 16" Y axis travel, 17.7" knee travel and 4.75" quill travel
- All ways are hardened and ground with Turcite B coating on X and Y axis ways for wear resistance and smooth operation
- Up to 990 lbs table load capacity



ACU-RITE[®]
MILLPWR
Two or Full Three
axis CNC Control



STORM CNC Vertical Machining Centers

Best Valued VMC in the Market Today...

Storm CNC Vertical Machining Centers are designed and built heavier with more standard features than any VMC in its size and price range...

VMC500L

- Linear Ways ▪ 23.6" x 12.6" Table ▪ 8,000 rpm Spindle
- 20"x16"x18" X/Y/Z Travel ▪ 10/7.5 hp Spindle Motor

VMC610L/S

- Linear or Square Ways ▪ 31.5" x 17.7" Table
- 10,000 rpm Spindle ▪ 24"x18"x20" X/Y/Z Travel
- 10/7.5 hp Spindle Motor

VMC850L/S

- Linear or Square Ways ▪ 39.37" x 19.68" Table
- 10,000 rpm Spindle ▪ 33.5"x20"x22" X/Y/Z Travel
- 15/10 hp Spindle Motor

VMC1020L/S

- Linear or Square Ways ▪ 47.24" x 19.68" Table
- 10,000 rpm Spindle ▪ 40"x20"x22" X/Y/Z Travel
- 20/15 hp Spindle Motor

VMC1300S

- Square Ways ▪ 55.23" x 23.62" Table ▪ 10,000 rpm Spindle
- 51"x25.5"x28" X/Y/Z Travel ▪ 20/15 hp Spindle Motor

VMC1600S

- Square Ways ▪ 66.93" x 32.08" Table
- 5,000 rpm Spindle ▪ 63"x31.5"x27" X/Y/Z Travel
- 20/15 hp Spindle Motor ▪ CAT #50



Clausing Super CNC Bed Mills

- Series 5000M is a user-friendly control, with integrated CAM programming or icon-based programming.
- Teach-in mode
- Draw graphics mode
- Canned cycles
- Up to 7.5 Hp spindle motor
- Inverter variable speed drive with 2 speed ranges
- 65 - 5160 rpm spindle speeds
- Up to 16.75" x 62" table
- Up to 2000 lbs table load capacity
- Up to 42.24" x 22.83" x 23.62" X, Y, Z travel
- Hardened and ground, square X and Y axes ways

ANILAM 5000M CNC Control



Clausing CNC Bed Mills

3-Axes CNC Bed Mills

- 3 axes Control/4-axes Readout
- 10" Flat Panel, Color, LCD Display
- Conversational Menu-prompt Programming
- Up to 41.3" x 19.6" x 23.6" X, Y, Z travel
- Up to 15" x 60" table size
- Up to 1800 lbs table load capacity
- Powerful 5 Hp spindle drive motor
- 70-4300 infinitely variable spindle speeds
- Hardened and ground table surface
- Ground T-slots for accurate reference edge

ACU-RITE® MILL-POWER Two or Full Three axis CNC Control



Clausing Large Swing CNC Lathes

600Group



Clausing offers Four Series of CNC Large Swing Lathes in a wide range of Swings, Spindle Bores, Centers and Spindle Drives...

CL Series

- Swing over bed: 35" 40" 45" 50"
- Swing over long cross slide: 20" 25" 30" 35"
- Center height over bed 17.5" 20" 22.5" 25"
- Center height from floor 44.27" 46.77" 49.27" 51.77"
- Center distance: 62" to 476"
- Max. weight between centers: 11,000 lbs
- Max. weight between centers with steady rest: 13,200 lbs
- Max. unsupported weight in chuck: 5,500 lbs
- Small closed steady rest capacity (optional): 1.18" to 15.75"
- Large closed steady rest capacity (optional): 13.8" to 27.56"

CB Series

- Swing over bed: 45" 50" 60" 70"
- Swing over long cross slide: 28" 33" 43" 53"
- Center height over bed 22.5" 25" 30" 35"
- Center height from floor 49.27" 51.77" 56.77" 61.11"
- Center distance: 70" to 488"
- Max. weight between centers: 14,300 lbs
- Max. weight between centers with steady rest: 16,500 lbs
- Max. unsupported weight in chuck: 6,600 lbs
- Small closed steady rest capacity (optional): 1.18" to 15.75"
- Large closed steady rest capacity (optional): 13.8" to 27.56"

CK Series

- Swing over bed: 50" 60" 70" 80"
- Swing over long cross slide: 29" 39" 50" 60"
- Center height over bed 25" 30" 35" 40"
- Center height from floor 55" 60" 65" 70"
- Center distance: 82" to 476"
- Max. weight between centers: 33,000 lbs
- Max. weight between centers with steady rest: 37,400 lbs
- Max. unsupported weight in chuck: 19,800 lbs
- Small closed steady rest capacity (optional): 1.18" to 15.75"
- Small open steady rest capacity (optional): 1.18" to 15.75"
- Large closed steady rest capacity (optional): 13.8" to 27.56"
- Large open steady rest capacity (optional): 13.8" to 27.56"

CC Series

- Swing over bed: 35" 40" 45" 50"
- Swing over long cross slide: 26" 27" 32" 37"
- Center height over bed 17.5" 20" 22.5" 25"
- Center height from floor 44.27" 46.77" 49.27" 51.77"
- Center distance: 94" to 488"
- Max. weight between centers: 22,000 lbs
- Max. weight between centers with steady rest: 26,400 lbs
- Max. unsupported weight in chuck: 9,900 lbs
- Small closed steady rest capacity (optional): 1.18" to 15.75"
- Small open steady rest capacity (optional): 1.18" to 15.75"
- Large closed steady rest capacity (optional): 13.8" to 27.56"
- Large open steady rest capacity (optional): 13.8" to 27.56"

Designed and built to meet your turning application... Extra heavy-duty, large swing, big bore, precision flat bed CNC lathes.

Product lines, machine design and specifications are subject to change without notice



The Clausing Advantage... Free Training for the User

When our customers purchase a Clausing CNC Machine Tool, they have invested in a state-of-the-art product offering many years of dependability and productivity. To ensure that our customers receive the maximum value from their investment, we offer free training sessions at our Kalamazoo CNC facility. The sessions are conducted by our staff of qualified Service Engineers.

Each training session includes segments on (1) CNC machining concepts (2) Programming (3) Set-up and (4) Maintenance. Hands-on training is conducted in our demonstration area and classroom and the training experience facilitates effective learning through real-life experience.

Our primary training objective aims to make our customers machines as productive as possible following installation. All our CNC technicians are available, by phone, fax or e-mail to assist machine operators.

For detailed catalogs of the full line of CLAUSING CNC Machine Tools, visit our Web Site:

www.clausing-industrial.com

or e-mail us to request an electronic (pdf) catalog at:

info@clausing-industrial.com



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Clausing Machine Tools used by:



To Build A Winning Race Car... You Need Precision Machine Tools!