



(GT-10) Gang Tool Lathe

Machine Features & Specifications

We are delighted to present the **GT-10** and other models of gang tool lathes that are the affordable option to Mill-Turn Turning Centers. We are confident that you will find this product a versatile, flexible and reliable addition to your company's manufacturing capabilities. Our single-piece heavy casting is the culmination of years of experience in machine tool manufacturing and offers the best features for gang tool and turret lathe construction. This machine configuration provides a very cost effective approach for Swiss live tool, or servo drive live tool applications on wide range of part diameters and sizes. Our driven tool spindles can perform axial milling, drilling, boring, broaching, radial milling and gear hobbing, and tapping functions. We have also developed post processors for the GSK controls in Autodesk's cloud product Fusion 360 CAM software to solve the programming challenges involved with this type of 5-Axis work.

CNC New, Inc. machines provide speed, power, and accuracy, in a very compact footprint. All the electrical components are of the highest grade hardened CNC controls, which are developed for CNC machine tools. These 5-axis systems include GSK CNC controls with the capability to perform indexing and interpolation functions through the use of an integrated C-axis. Servo driven spindle motors and drives have much greater low rpm torque and rapid duty cycles than vector type spindle motors and drives.

CNC New, Inc. provides sales, service, and support for the products we manufacture, including support of machine tool models manufactured in earlier years by affiliated companies. All electronic components including cables, motors and drives are provided by each supplier, which results in single source responsibility regardless of the CNC control selection. Spare part components are available from our facility in Southern California and we are able to provide prompt support, service, and parts for the life of your machine. ATS Systems based in Southern California has a developed range of work holding options that would allow customers to use existing collet systems to facilitate quick change over of work holding collets for rapid changeovers. We also have 18" of travel in the X-Axis and heavy-duty 3/4" center height Swiss quality tool holders to leave permanent set-ups in place to eliminate the need to change tools to run a variety of different jobs. Also now available is the first affordable robotic arm loading system for our industry.

Single Piece Casting: Construction Meehanite Casting

The **GT-10** is built from a 3,300 lb single piece casting with the table at a 45° slant. The casting has been designed with many access ports to improve the serviceability of the machine. The chip and coolant flow are directed side of the machine for convenient installation of a chip conveyor. We are providing a selection of large X & Z servo axis motors with this system, and the rigidity of the machine can accommodate extremely aggressive machining applications. These models are the real Industrial Strength Gang Tool & Turret Designed Machine Tool Systems that will meet the needs of customers in today's competitive market.

Cross Slide: Linear bearings provide for low friction feed

The **GT-10** cross slide design incorporates a high performance positioning system featuring high preload, low friction, four circuit, roller linear bearings and a precision-ground ball screw in a super precision thrust bearing set. The system provides a generous machining envelope of 18" of travel in the X-axis and 13.7" of travel in the Z-axis. Our gang lathes use a tool plate system to mount cutting tools. We offer options of riser blocks to bring you to specific tool heights. T-slots allow for the easy mounting of multi-hole tool holders, for use of up to 18 total tools, depending upon tool layout. The performance slide utilizes state-of-the-art AC brushless servomotors and digital drives. Linear guides are 30mm sets and are extremely rigid. Ball-screws are precision ground, 32mm, 8mm-Lead X-Axis and 10mm-Lead Z-Axis.

Spindle Options: Wide range of work holding options available

The **GT-10** standard spindle option provides a 4,500 maximum rpm. The spindle is an A2-5 mounting that will allow a wide selection of work holding outlined in proceeding pages. The GT-10 offerings an optional 6" chuck. This spindle has a hydraulic collet closer and can bar feed material maximum 45mm (1.77").

C-Axis Spindle: Mill and turn difficult parts efficiently

The **GT-10** spindle design allows for the flexibility and capability to do parts that normally require machinery that costs significantly more. The maximum center height of this machine is 70mm. The C-Axis Spindle allows you to mill and turn parts off center. Slots, cross-holes, bolt-hole circles, ID keyway broaching, and radial and axial milling, with many other secondary processes traditionally requiring a milling machine/machining center, can be performed on the gang lathes in combination with turning operations. The C-Axis spindle achieves performance in the most complex duty cycles and allows for the use of live tools.

Live Tooling/Modular Design: *The flexibility to meet your needs*

GSK 980TDi CNC control is a 5-Axis system and we have developed post processors in Fusion 360 to generate the code for our machines. Live tooling allows for a wide-range of drilling and milling operations to enhance the machine's flexibility for small to large lot runs. Additionally, because our gang lathes modular design, the available configuration options will enable you to create a machine that will more precisely fulfill your application requirements. We have available servo driven live tools that are gear driven. The spindles are available in ER-20 and ER-25 spindle configurations. The spindle themselves come in single, double, triple and quadruple configurations. The spindles are controlled as a programmable axis and can tap, or do complex milling operations. The servomotors powering the spindles are a 2hp, or 1Kw and have more than enough torque to do heavy milling work. We also have the option to offer High Speed Spindles configurations from NSK America on request.

Tool Holders & Options: *Custom tool holders & options*

We offer standard $\frac{3}{4}$ " center height tooling, and can provide custom tool holders for live tool and grinding spindles. The machine table starts at a 70mm center height on the GT-10 allowing us to provide riser blocks for a specific desired center height for the specific machine. The design of these tool holders we have a much thicker front lip on the tool table and we use a much heavier T-Nut in the T-Slot. The added strength of this system allows the use of the much larger motors drives and tooling.

CNC Controls: *Best Value & Reliability*

The GT-ISL gang tool lathes are offered with GSK CNC controls, motors, and drives. This manufacturer is the second leading producer of CNC kits world wide annually and they build an industrial hardened CNC control system. These controls have adapted an operating system into hardware that has been designed to function in a manufacturing environment. This means that they have been designed to handle wide temperature changes, shaking, and air-borne contamination. Therefore those things will not affect the CNC operation in the same way that a PC-based control would be affected. All cabling is liquid tight with a minimum level of IP-65 ratings. With this CNC control you will have single source responsibility for the support of the entire machines electronic system.

GT-10 Specifications		
Capacities	S.A.E	Metric
Max Turning Diameter	14.1 in	360 mm
Max Swing Over Table	5.1 in	130 mm
Bar Capacity	1.77 in	45 mm
Travels & Feedrates		
X-Axis Travel	17.75 In	444 mm
Z-Axis Travel	13 in	330 mm
Rapid on X-Axis	590 in/min	15 m/mm
Rapid on Z-Axis	787 in/min	20 m/mm
Axis Max Feed Rate	400 in/min	10.15 m/min
Spindle		
Power Rating	10hp (Optional15hp)	7.5 kw (opt. 11 kw)
RPM	15 – 4,500	
Spindle Bore	2.21 in	56 mm
Drawtube bore	1.77 in	45 mm
Spindle Nose	A2-5	A2-5
Collet Actuator	Hydraulic Cylinder	
Base		
Integral Casting	One Piece Construction	Slant Angle 45 Degree
Rail Span	17.32 in	440 mm
Casting Weight	3300 lbs	1500 kgs
Linear Rails	X/Z: 1.81", in P Accuracy	X/Z: 30mm in P Accuracy
Ball Screws Precision	X/Z: Ground 1.26" in C3 Accuracy	X/Z: Ground 32mm in C3 Accuracy
Auto Lubrication	Linear rails and ball screws	
Head Stock	Cast Iron	
Turret WorkHolding		
Gang Turret Table HT.	2.756 in	70mm
Table Length T-Slot	24.41 in	620mm
Chuck Size	6 in	
Collet Nose Options	A2-5	
Center Height Holders	¾" standard tool holders	Custom live tool holders, etc.
Precision		
Positional Repeatability	±0.0001 (one tenth)	0.00254 mm
Positional Resolution	±0.00005(50 millionths)	0.00127 mm
Positional Accuracy	±0.0001 (one tenth)	0.00254 mm
Spindle Runout	0.00005 (50 millionths)	0.00127 mm
C-Axis Indexing	Increment 0.001°	360,000RadialPosition
Requirements		
Coolant Capacity	18.5 gallons	70 Liters
Coolant Pump	¾ hp	0.5 Kilowatt
Power Required	16 KVA- 42 amps	Voltage 208-240 VAC 3-Phase
Machine Dimension		
Floor Space L X W	68 x 35 in	1730 x 890 mm
Machine Height	63 in	1600 mm
Sheet Metal Length	87.4 in	2220 mm
Sheet Metal Width	56.6 in	1438 mm
Machine Weight	4,500 lbs	2,045 kgs

GSK 980TDi CNC Control:

GSK is the second largest CNC control builder in the world. They are producing approximately 500 CNC systems per week. This is not a PC based system, but a hardened CNC with the software built directly into the hardware providing maximum reliability. The modular design of the products allow quick replacement of major components if or when required. GSK provide complete CNC systems which includes all required motors, drives, cables, and controls. The NEW 980TDi CNC control with updated software/hardware is a very aggressive full-featured control with 2ms block processing and programs with G-codes and M-functions. This control uses the GSKLINK bus technology, matched with 17bit absolute encoders that carry out automatic recovery of the system power-on no-block mechanical zero return, servo parameter on-line modification or servo state on-line diagnosis, etc. We are using a servomotor and drives on the spindles to perform C-Axis functions. This combination will provide the best performance and number of duty cycles per minute, and will also facilitate the use of live tools. We have available post processors in Fusion 360 for the GSK CNC controls. Standard Features: 4-Axis simultaneous control, 5-axis digital feed control, 2-axis analog feed control, LAN interface Ethernet Port, complex curve surface machining speed: 8m/min optimum machining speed: 4m/min, Max. Positioning speed: 60m/min' max. Feedrate: 15m/min 1000 block look-ahead and spline interpolation, Excellent high-precision and high-speed interpolation, Supports macro programs (Macro B) more concise programs, Supports PLC online monitoring, edit, compile and signal follow functions, Supports multiple languages with a change of a parameter, Supports RS232, USB and network interfaces and data transfer, DNC machining and USB on-line machining, Color LCD monitor with 800 X600 resolution 8.4" or Optional 10.4", Rigid tapping, graphic programming, run and test program by hand wheel, 208v (Range 190-240) 3-phase system electronics. 64M program space 60Mb user storage (program capacity).

429-0015 CNC Control	Standard CNC control used with the GT-ISL gang tool lathe	GSK980TDi CNC Controller 8.4" Color LCD, 5 axis controllable (C-Axis), USB interface, inner PLC, rigid tapping, max rapid speed 60m/min, 41/36 I/O contacts,
429-2070 X&Z Axis motor & drive	X & Z axis servomotors and drive package GT-10 & GT-ISL-50.	GSK 10Nm Axis Package: (A2) servo motor & driver includes 2.5KW, 2,500 watts, 3.3HP, 10Nm, 7.3 lbf/ft, 2,500rpm, 10A, 130 flange
429-3040 Spindle Motor & Drive	10hp C-Axis Spindle motor & drive package. Used with model GT-10 model lathe. 220V.	AC servo motor and drive (10hp, max speed 7,000 rpm, and 5,000 line encoder. 63 ft-lb, 86 Newton Meters

Work Holding Options

We offer a wide range of standard work holding option on the A2-5 Spindle nose of the GT-10. The standard mount would facilitate a wide range of manufactures for different work holding options. Our standard work holding options come from ATS Systems located in Orange County California. They offer a wide range of collet chucks that include Dead length, or True Length collet chucks in addition to Warner & Swasey Style Chucks S style collet chucks. The standard work options from ATS listed below.

Auto Strong 3-Jaw Chuck Options:

329-6300	1	Auto Strong N-206 6" 3-Jaw hydraulic chuck includes drawtube and mounting for A2-5 spindle. Includes 3-value hydraulic station.	1,440.00
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ATS Work Holding: Pull Back Design Collet Chucks:

Collet chucks offer low inertia for fast cycle times. Low profile designs for minimum tool interference. ATS chuck body is case hardened steel, made in the USA and guaranteed 0.0002" T.I.R. on closing taper. Cost effective work holding solution, ideal for 1st operation, slug work and feed to length barfeeding. Easy installation with direct mount to machine spindle. Actuated by pullback motion of the drawtube. Available for use with C, J and S style collets. Includes drawtube, drawtube adapter and chuck body. 7-degree closing angle taper on 2J, 3J, and 22J collets. 10-degree closing taper angle on all C style collet systems. 15-degree closing taper on S collets. Superior tool clearance with reduced body diameters.

320-1020	1	ATS A2-5 5C Tapered Nose 3.5" Length	1,090.00
320-1025	1	ATS A2-5 5C Threaded Nose 3.5" Length	1,290.00
320-1030	1	ATS A2-5 5C Threaded Nose 5" Length	1,290.00
320-1035	1	ATS A2-5 5C Tapered Nose 5" Length	1,190.00
320-1055	1	ATS A2-5 16C Tapered Nose 6.25" Length	1,390.00
320-1060	1	ATS A2-5 16C Collet Chuck Step Chuck Capability	2,090.00
320-102J	1	ATS A2-5 2J Collet Chuck 5" Length	1,390.00
320-103J	1	ATS A2-5 3J Collet Chuck 5.75" Length	1,390.00
320-1022J	1	ATS A2-5 22J Collet Chuck 6" Length	2,190.00
320-1086	1	ATS A2-5 Warner Swasey Pull Back Style S15 utilizes #3 W & S collet pads	2,490.00
320-1088	1	ATS A2-5 Warner Swasey Pull Back Style S20 utilizes W & S #4 collet pads	3,590.00
320-1091	1	ATS A2-5 Pull Back Collet Chuck S15 (H) Hardinge utilizes standard S15 collet pads	2,490.00
320-1093	1	ATS A2-5 Pull Back Collet Chuck S20 (H) Hardinge utilizes standard S20 collet pads	3,290.00

ATS Work Holding: True Length Design Collet Chucks:

Innovative patented design providing fixed collet position ensuring linear accuracy. Ideal for second operation applications with parts transfers. Utilizes standard C, J, and S collets. 7-degree closing angle on J & S style collets, and 10-degree closing angle on all C style systems. Superior tool clearance with reduced body diameters. Adjustability feature enables user to adjust the T.I.R. of the system.

320-2015	1	ATS A2-5 5C True Length Collet Chuck for GT-10 models. Includes dead length collet chuck, adapter and drawtube	3,790.00
320-2030	1	ATS A2-5 16C Small Body True Length Collet Chuck for GT-10 models. Includes dead length collet chuck, adapter and drawtube.	4,290.00
320-2035	1	ATS A2-5 2J True Length Collet Chuck for GT-10 models. Includes dead length collet chuck, adapter and drawtube.	3,690.00
320-2050	1	ATS A2-5 3J True Length Collet Chuck for GT-10 models. Includes dead length collet chuck, adapter and drawtube.	4,390.00
320-2055	1	ATS A2-5 22J True Length Collet Chuck for GT-10 models. Includes dead length collet chuck, adapter and drawtube.	4,490.00
320-2065	1	ATS A2-5 S20 True Length Collet Chuck for GT-10 models. Includes dead length collet chuck, adapter and drawtube.	4,790.00
320-2075	1	ATS A2-5 S26 True Length Collet Chuck for GT-10 models. Includes dead length collet chuck, adapter and drawtube.	5,190.00
320-2085	1	ATS A2-5 S30 True Length Collet Chuck for GT-10 models. Includes dead length collet chuck, adapter and drawtube.	5,690.00

ATS Work Holding Options: True Length Nose Cap Chucks:

Innovative patented design providing fixed collet position ensuring linear accuracy. Ideal for second operation applications with parts transfers. Utilizes standard Index and Brown & Sharpe style collets. System is adaptable to accept multibore collets. Adjustable feature enables user to adjust for T.I.R.

320-3005	1	ATS A2-5 Brown & Sharpe Nose Cap True Length #21 Collet Chuck for GT-10 model. Includes dead length collet chuck, adapter and drawtube.	3,290.00
320-3020	1	ATS A2-5 Brown & Sharpe Nose Cap True Length #22 Collet Chuck for GT-10 model.	3,290.00

		Includes dead length collet chuck, adapter and drawtube.	
320-3030	1	ATS A2-5 Nose Cap True Length Index B42 or special S10 master collets Collet Chuck for GT-10 model. Includes dead length collet chuck, adapter and drawtube.	3,690.00
320-3040	1	ATS A2-5 Nose Cap True Length Index B60 or special S16/S20 master collets Collet Chuck for GT-10 model. Includes dead length collet chuck, adapter and drawtube.	4,290.00

ATS Work Holding: Shorty Quick Change True Length:

Innovative patented design providing fixed collet position ensuring linear accuracy. Ideal for 1st and 2nd operation applications and barfeed operations. Utilizes Hardinge Quick-Change Collets, less expensive than American Standard collets. 20-second collet change over. Seals and plugs easily replaced minimizing downtime for maintenance. .0002" T.I.R. guaranteed on closing taper.

320-3050	1	ATS A2-5 Shorty Quick Change True Length Collet Chuck utilizes SQC65 quick-change collets.	3,890.00
320-3060	1	ATS A2-5 Shorty Quick Change True Length Collet Chuck utilizes SQC80 quick-change collets.	Upon Request

ATS Work Holding: Quick Change True Length:

Innovative patented design providing fixed collet position ensuring linear accuracy. Ideal for 1st and 2nd operation applications and barfeed operations. Utilizes HQC42 & HQC65 Collets. .0002" T.I.R. guaranteed on closing taper. Adjustable feature enables you to adjust for T.I.R.

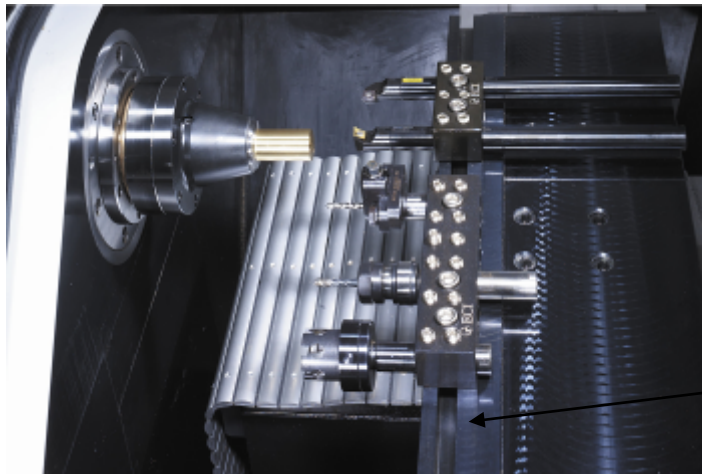
320-3070	1	ATS A2-5 Quick Change True Length Collet Chuck utilizes HQC42 quick-change collets.	3,890.00
320-3080	1	ATS A2-5 Quick Change True Length Collet Chuck utilizes SQC65 quick-change collets.	4,390.00

Machine Tool Riser Plates:

Each model of GT- gang lathes has a very low table for the original flat table, which has three T-Slots. Original table heights of the machines are as follows. GT-5 is at 45 mm or 1.77", GT-7 begins at 55 mm, or 2.1", the GT-10 starts at 70 mm or 2.7" center height, and the GT-15, which starts at 96 mm, or 3.77" center height. We offer custom length riser plates for the GT-15 models based on selected options, turrets, Y-Axis etc. The machines original table is 24" so if you want to use ¾" tool holders on the entire travel of the models you would purchase two 12" riser that would cover the original t-slot of the machine. This flexibility allows us to install much larger live tool spindles and grinders on the machines and allows us to offer much stronger tool holders and tooling to compliment the larger motors and ball screws of the machines. Optional ½" center height riser tool plate tables available on request.

610-6048	1	GT-10 precision ground riser plate 18". This selection if you select a single axial live tool spindle, or the single or double radial live tool spindles. Utilize ¾" center height tool holders.	895.00
610-6030	1	GT-10 precision ground riser plate 12" length. Requires two risers to cover the entire length of the 24" T-Slot of the original machine for all gang tooling, or a single if working with a double axial live spindle, Vertical live tool or Y-Axis or 8-station turret. Utilize ¾" center height tool holders.	795.00
610-6040	1	GT-10 precision ground riser plate 6" length. Used as an option with an 18" riser plate when you remove live tools and want the machine to be a full travel of all the gang tool travel.	695.00

Tool Holders:



GT-27 Tool Plate

CNC New Tool Holders: www.cncnew.com

Round-Shank Tool Holders:

This section will address the needs of mounting round-shank tooling. The GT-ISL provides tool plate riser blocks that utilize the heavy-duty $\frac{3}{4}$ " center height tooling as the standard for each of the gang tool models. The fixed-height blocks offer rigidity and consistency of center-height in two choices of bore diameters

The fixed type blocks allow the use of a modular approach that provides the ability to "group together" all, or part of a set-up for storage and re-use later. This approach can significantly reduce changeover times to a new job. The table located below illustrates some, but not all, of the available options. The largest block can accommodate 8 tools. The part numbers and pricing are: $\frac{3}{4}$ " bore. All are available in $\frac{5}{8}$ " bore as well.

Fixed 1-position block		Fixed 3-position block		Fixed 7-position block	
					
Part #	GT-1075R	Part #	GT-3075	Part #	GT-6075
\$110.00		\$150.00		\$350.00	

A partial list of posi-lock tooling for 3/4" center height machines

CNC New, Inc. Heavy Duty 3/4" Center Height Dove Tail Tooling		
Description	Part Number	List Price
1-Position, 3/4" Ctr. 3/4" Bore with lip	GT-1075	\$110.00
1-Position, 3/4" Ctr. 1" Bore with lip	GT-1175	\$110.00
2-Position, 3/4" Ctr. 3/4" Bore with lip	GT-2075	\$125.00
2-Position, 3/4" Ctr. 1" Bore with lip	GT-2175	\$125.00
3-Position, 3/4" Ctr. 3/4" Bore with lip	GT-3075	\$150.00
3-Position, 3/4" Ctr. 1" Bore with lip	GT-3175	\$150.00
7-Position, 3/4" Ctr. 3/4" Bore with lip	GT-7075	\$350.00
7-Position, 3/4" Ctr. 1" Bore with lip	GT-7175	\$350.00
8-Position, 3/4" Ctr. 3/4" Bore with lip	GT-8075	\$450.00
8-Position, 3/4" Ctr. 1" Bore with lip	GT-8175	\$450.00
Cutoff tool front mount	GT Cutoff Front	\$130.00
Square tool holder for 3/4" tools L type right	GT L Type Right	\$125.00
Square tool holder for 3/4" tools L type left	GT L Type Left	\$125.00
Square tool holder for 3/4" tools	GT Square 3/4"	\$125.00
Tool Post Extension Short 1"	GT-Ext-Short	\$210.00
Tool Post Extension Long 2"	GT-Ext-Long	\$240.00
Tall Tool Post up to 4"	GT-Tall-Post	\$295.00
Tool Post A-Type	GT-Tool-Post-A	\$275.00
Tool Post B-Type	GT-Tool-Post-B	\$275.00
Offset Post Adapter	GT-Offset-Post	\$225.00
Offset Post Assembly Rail	GT-Offset-Rail	\$140.00
Radial Live Tool Holder 180° Right Angle 30mm	GT-RLT-30	\$225.00
Axial Live Tool Holder 90° 30mm	GT-ALT-30	\$275.00
Vertical Live Tool Holder 30mm	GT-VLT-30	\$225.00

CNC New Hydrodynamic Bar Feeders:

CNC New is now providing a very price competitive solution for single bar hydrodynamic bar feed system. There are many benefits operating a hydraulic system over pneumatic and mechanical systems. A hydrodynamic barfeed is safe, quiet and provides quick-change overs. This bar feeder can handle material to 1-3/4" diameter. We are offering a range of feed tubes to facilitate a broad range of sizes with less than 5-minute feed tube changeover. The gang tool lathes have a short headstock so the loader type systems are not a good match for our machines. The material does not turn inside a loader so the length of the material that you can work with is limited. We have successfully built support stands that attach to the back of the spindle, and for specific production this concept can work. We also work with LNS, MTA and Edge manufactures and their magazine type bar feeds ranging from 6' to 12' foot material. Prices range from \$20,000 to \$32,000. We can provide information from these manufactures on request. We are offering two sizes of Hydrodynamic systems to consider. The FB system can accommodate sizes from 4 mm to 26 mm, and the larger FT system ranges in sizes from 7 mm to 45 mm. The feed tubes are engineered to work with a 8mm range of material. Example is the 18mm feed tube could work with material down to 10mm diameter. These are approximate estimations and will be impacted by type of material and straightness of the bars. CNC Hydrodynamic system is 12.5' overall length and can accommodate material to a maximum length of 8.2'. We also recommend spindle liners with this item to maximize the support of the material and quiet & safe operation of the system.

830-8018	1	FT-18 CNC Hydrodynamic barfeed system. Material to 18mm or .70". Overall length of system is 12.5', maximum bar length 8.2'. This is a dedicated single bar unit able to handle bars from 18mm to 10mm.	\$5,995.00
830-8034	1	FT-34 CNC Hydrodynamic barfeed system. Material to 34mm or 1.33". Overall length of system is 12.5', maximum bar length 8.2'. This unit comes with 18mm, 26mm and 34mm feed tubes. Able to work with 10mm to 34mm diameter bars. Good selection to work with the GT-5 and GT-7 lathe models.	6,995.00
830-8042	1	FT-42 CNC Hydrodynamic barfeed system. Material to 42mm or 1.65". Overall length of system is 12.5', maximum bar length 8.2'. This unit comes with 18mm, 26mm, 34mm, and 42mm feed tubes. Good selection to work with the GT-10 lathe model.	6,995.00
830-8045	1	FT-45 CNC Hydrodynamic barfeed system. Material to 45mm or 1.77". Overall length of system is 12.5', maximum bar length 8.2'. This unit comes with of 26mm, 34mm, 42mm and 45mm feed tubes. GT-15 Lathe	6,995.00

Other Machine Options & Considerations:

	1	Foot Pedal Open/Close Chuck	395.00
	1	Additional M-Function w/Relay and Solenoid Valve	595.00
	1	Additional M-Function with Relay and Contactor	595.00
	1	Additional M-Function with Coolant Valve	995.00
	1	Addition M-Function with Relay	395.00
	1	Air input FLR	795.00
	1	NSK Air Live Tool Spindle Interface	795.00
	1	NSK Electric Live Tool Spindle Interface	1,495.00
	1	Caliper Brake System to hold spindle in position when working with power spindles.	1,795.00
	1	16 Additional M-Functions Outputs 16 Inputs	1,495.00
	1	Bar Feed Interface Based on MFG.	Upon Request
	1	Spindle liners 1/8", 3/16", 1/4", 5/16", 3/8", 7/16", 1/2", 5/8", 9/16", 3/4", 13/16", 7/8", 15/16", 1", 1-1/16", 1-1/8", 1-3/16", 1-1/4", 1-5/16", 1-3/8", 1-1/2", 1-5/8"	Upon Request
	1	Automatic Tool Presetter, manual and automatic modes. User friendly	3,995.00
	1	Work Gauging Probe	9,750.00
	1	Coolant Tank Oil Skimmer	695.00
	1	Auxiliary Coolant Filter System	1,995.00
	1	4-Station Coolant Manifold with Loc Line and Shut Off Valves	795.00
	1	2 nd Coolant on/off for Coolant Fed Drills	1395.00
	1	High-Pressure Coolant System, 300 psi (21) bars	5,995.00
	1	High-Pressure Coolant, 1000 psi (69 bar)	7,995.00
	1	Remote Hand Wheel	795.00
	1	Remote Hand Wheel Color LCD	1295.00
	1	High-Intensity Lighting	695.00
	1	Rotary union for through Spindle Coolant	1995.00
	1	Enclosure Exhaust System	1,450.00
	1	Parts Catcher System	2,495.00
	1	Belt-Type Chip Conveyor System	3,795.00
	1	Internal High-Voltage Isolated Transformer for 380-480V operation	Upon Request
	1	Export Packaging	1,295.00