MACHINE AND CONTROL OPTIONS	
is	
RIGID TAPPING	\$ 1,250.00
FLOOD COOLANT SYSTEM - MB	\$ 950.00
SPRAY MIST COOLANT SYSTEM	\$ 625.00
AIR BLAST SYSTEM Programmable air nozzle for plastic, graphite and other dry materials	\$ 450.00
ELECTRICAL CABINET AIR CONDITIONER Replaces standard fan vented cabinet with a sealed cabinet. Air conditioning unit keeps inside temperature at the desired set temperature regardless of what the outside temperature is. Recommended for area where ambient temperature exceeds 100 degrees Fahrenheit.	\$ 2,450.00
GRAPHITE MACHINING PACKAGE (Up TO 60" Travel) This package includes one piece sealed way covers and a sealed electrical cabinet with an high efficiency heat exchanger.	\$ 5,950.00
S	
10,000 RPM 40 TAPER SPINDLE (includes refrigeration unit and air purge seal)	\$ 4,950.00
12,000 RPM 40 TAPER SPINDLE (includes refrigeration unit and air purge seal)	\$ 7,450.00
BT-40 SPINDLE (for Japanese style BT-40 tooling)	\$ 650.00
350 PSI COOLANT THRU SPINDLE SYSTEM High pressure, adjustable 100- 350 PSI thru spindle coolant system. Includes high volume 8 gallon / minute pump and 10 micron replaceable filter. Features full	\$ 7,450.00

## CONTROLLERS

pressure even with tool coolant holes up to .200" diameter.

4TH AXIS DRIVE AND WIRING for 6" to 10" Rotary Tables Add this option to any Fryer machine in \$ 3,450.00 order to control the 4th axis rotary tables as a full contouring 4th axis. Includes drive, wiring and 4th axis software.

## **TABLES**

i feature exceptional quality and accuracy. Dual worm gear drive, high torque disc brake, AC brushless motor, coolant tight motor using, quick disconnect cable set, table clamp set and ground locating keys. (Requires 4th axis drive wiring)

## Requires rotary table controller above

6" 4 <sup>TH</sup> AXIS ROTARY TABLE	\$ 8,450.00
6" TAILSTOCK	\$ 1,050.00
6" ROTARY TABLE CHUCK	\$ 925.00
8" 4 <sup>TH</sup> AXIS ROTARY TABLE	\$ 9,950.00
8" TAILSTOCK	\$ 1,250.00
8" ROTARY TABLE CHUCK	\$ 1,105.00

## **VS - SIEMENS 828**

REMOTE ELECTRONIC HANDWHEEL Handy jog handwheel is located in a portable box. Features axis selector switch and a resolution selector for coarse or fine movement. Remote stop start is also included. Also features an innovative function which allows you to control the movement (forwards or backwards) and feedrate of running a part program (Handwheel Run).	\$	950.00
HANDWHEEL RUN FUNCTION This feature allows you to control your program execution with the handwheel. Turning the handwheel causes the program to run with you controlling the feedrate. You can move forwards and even backwards with this handy feature. Designed to make proving-out programs easier with safety and confidence.	\$	550.00
AUTOMATIC TEACH MODE Allows you to create parts by manually turning the handles and the CNC will remember these moves as an automatic program. (Requires 3 handwheel or remote handwheel option).	\$	600.00
DXF FILE IMPORT FEATURE allows you to import DXF files and quickly convert to a conversational program. Automatically create points for drilling operations or contours for milling.	\$	950.00
ENHANCED PART PROBE SET-UP CYCLES The standard cycles are: edge find, skew angle, circular pocket and boss, rectangular pocket and boss. The enhanced cycles include: Spacing 2 Edges, Any Corner, Rectangular Pocket, 2, 3 and 4 Holes Alignment, 2,3 and 4 Circular pocket Alignment and Align Plane.	\$	600.00
IN-PROCESS PART PROBE MEASUREMENT CYCLES This feature allows you to measure part features during program execution. Can also be used in MDI mode after cutting the part to then measure certain features and display the measurement	\$	850.00
RESIDUAL MATERIAL DETECTION This software option allows re-machining of pocket milling contours with a tool smaller than the original tool. The control will remember where material has already been machined and will cut only residual material.	\$	850.00
HIGH SPEED NETWORK INTERFACE High speed Ethernet port is the ideal way to connect your machine to your LAN (local area network). Features 10/100 MB/s bandwidth for fast uploads and downloads of part programs. Also features a spooling option that allows you to run part programs larger than the memory of the machine. Available in a wireless package for \$200.00 extra.	\$	1,250.00
SPARE "M" FUNCTION (use to connect remote devices like indexers, shuttles, clamps, etc.)	\$	350.00
SIEMENS OFFLINE PROGRAMMING SOFTWARE Easy-to-use software package that installs on a standard desktop PC and duplicates the control functions. Allows full programming and part program verification. Single package for lathe and mill. Windows 7 compatible.	\$	1,850.00
EXPANDED MEMORY 6 GB - Standard memory of 6 MB is increased to 6 GB for handling larger CAM programs	\$	850.00
3D HIGH SPEED MACHINING Features high speed 1.5ms block processing and 500 block look-ahead. Advance Surface features jerk control and nano smoothing with a compressor mode which determines optimal velocity for programs containing circular and linear blocks. High speed roughing parameters and lower speed finishing parameters provide incredible surface finish at lowest possible cutting time.	\$	1,950.00
4TH AXIS SURFACE CYCLES Allows programming of XYZ coordinates and cycles like pockets and engraving. These are then automatically projected onto a cylindrical surface. For use with 4th axis rotary tables.	\$	1,250.00
SIEMENS TOUCH 2200 CNC CONTROL UPGRADE The 2200 CNC is based on the powerful Siemens 840D platform. This control features a 15" touch screen display, 5 axis expandable and advanced operator functions. Includes Handwheel run and Run verify features as well as probe cycles.	\$	4,950.00
VS - FANUC		
FANUC 0i MF	No Extra Charge	
HIGH SPEED ETHERNET NETWORK PORT (100 MB/SEC)	\$	1,250.00

USB PORT FOR MEMORY STICK DEVICES		Standard
REMOTE ELECTRONIC HANDWHEEL WITH AXIS AND RESOLUTION SELECT	\$	950.00
HIGH SPEED MACHINING PACKAGE for 0i (Fanuc AiCC nano) This package is designed for die mold applications where the ultimate in performance is desired. Features 2 millisecond block processing speed with 200 block look ahead. Bell shaped ACC/DEC interpolation. Nano smoothing and jerk control included	\$	5,540.00
WORK OFFSETS – 48 PAIR STANDARD		Standard
430 - 500 VAC 3 PHASE POWER	\$	1,950.00
FRYER AUTOMATIC TOOL AND PART PROBE PACKAGE This package includes table mounted tool probe to auto set the tool length offset and a wired part probe to auto set pocket centers, bosses, and find edges. The simple graphical interface included gives the operator the fastest set-up possible.	\$	1,750.00
MARPOSS WIRELESS TOOL AND WIRELESS PART PROBE PACKAGE Package includes a wireless (IR) table mounted tool probe that automatically measures and sets your tool length and diameter offsets. Also included is an easy to use wireless part probe that works with the ATC and allows you to quickly find edges, hole centers, bosses and many more shapes. Simple graphical menus make operations fast.	\$	6,450.00
RENISHAW WIRELESS TOOL AND PART PROBE PACKAGE Special package includes a wireless table mounted tool probe that automatically measures and sets your tool length and diameter offsets. Also included is an easy to use wireless part probe that works with the ATC and allows you to quickly find edges, hole centers, bosses and many more shapes. Simple graphical menus make operations fast. System can also be used to measure part geometry.	\$	7,450.00
KHOLDING		
SANDVIK #40 V-FLANGE TOOLING PACKAGE Standard tooling package includes: (6) collet chucks with the following collet sizes; (1) 1/4"; (2) 3/8"; (2) 1/2"; (1) 5/8"; (1) 3/4"; (1) 1". Solid end mill holders as follows: (2) 3/8"; (2) 1/2"; (1) 5/8"; (1) 3/4"; (1) 1", (1) 1/2" keyless drill chuck with holder, collet chuck wrench & set-up fixture, (14) retention knobs.	\$	3,650.00
PACKAGE OF 12 CAT-40 OR BT-40 RETENTION KNOBS (specify at time of order)	\$	235.00
CES		
FACTORY SET-UP & TRAINING AT YOUR FACILITY (3 Days Contiguous US. Includes travel expenses)	\$	3,950.00
TRAINING ONLY 1 DAY (Expenses and travel time additional)	\$	1,000.00
440 VAC 3 PHASE POWER (220 VAC standard) CHANGE TO 220 VAC SINGLE PHASE - 2200 (Uses digital phase converter)	Ф	NC 3 950 00
CHANGE TO 220 VAC SINGLE FRASE - 2200 (USES digital phase converter)	\$	3,950.00