

# Consolidated Machining Equipment List

2-2-09

## CNC SWISS TYPE MACHINES

- (1) CITIZEN B-12 VI, 2 LIVE TOOLS, 4 AXIS, \_" MAX. SPINDLE CAPACITY, BAR LOADERS
- (4) CITIZEN B-12, 3 AXIS, \_" MAX. SPINDLE CAPACITY, MAGAZINE BAR LOADERS
- (2) CITIZEN C-16, LIVE TOOLS, 9 AXIS, 5/8" MAX. SPINDLE CAPACITY, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADERS
- (1) CITIZEN L-20, LIVE TOOLS, 7 AXIS, \_" MAX. SPINDLE CAPACITY, MAGAZINE BAR LOADERS
- (2) CITIZEN L-20 VII , LIVE TOOLS, 7 AXIS, \_" MAX. SPINDLE CAPACITY, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADERS
- (1) CITIZEN L-20 VIII , LIVE TOOLS, 7 AXIS, \_" MAX. SPINDLE CAPACITY, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADER
- (1) CITIZEN A-20 2F7PL , LIVE TOOLS, 7 AXIS, \_" MAX. SPINDLE CAPACITY, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADER
- (1) CITIZEN L-25 VII, LIVE TOOLS, 7 AXIS, 1" MAX. SPINDLE CAPACITY, BAR LOADER
- (1) CITIZEN L-25 VII, LIVE TOOLS, 7 AXIS, 1" MAX. SPINDLE CAPACITY, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADERS
- (2) CITIZEN L-32 VII, LIVE TOOLS, 7 AXIS, 1 \_" MAX. SPINDLE CAPACITY, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADERS

## CNC MULTI-AXIS LATHES

- (2) NAKAMURA WTS-150, 2 UPPER AND ONE LOWER TURRET, LIVE TOOLS, 1 5/8 MAX SPINDLE CAPACITY, Y AXIS ON UPPER TURRETS, SUB-SPINDLE, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADERS
- (3) NAKAMURA NTY3, 2 UPPER AND ONE LOWER TURRET, LIVE TOOLS, 1 5/8 MAX SPINLDE CAPACITY, Y AXIS ON ALL THREE TURRETS, SUB-SPINDLE, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADERS
- (1) NAKAMURA WT-150, LIVE TOOLS, 2" MAX SPINDLE CAPACITY, SUB-SPINDLE, ONE UPPER AND ONE LOWER TURRET, Y AXIS ON UPPER TURRET, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADER
- (1) NAKAMURA TW-20, LIVE TOOLS, 2 5/8 MAX SPINDLE CAPACITY, SUB-SPINDLE, 2 TURRETS, HIGH PRESSURE COOLANT, MAGAZINE BAR LOADERS
- (1) Mori Seiki SL2500Y Turning Center, 4-axis machining, Y-axis control.

## CNC LATHES

- (1) AMERICAN WAY, 5C COLLET CHUCK, 1"MAX SPINDLE CAPACITY, BAR LOADER
- (2) HAAS SL-10, 16C COLLET CHUCK, 6" 3 JAW CHUCK
- (1) HYUNDAI HIT 8F, 16C COLLET CHUCK, 6" 3 JAW CHUCK, HIGH PRESSURE COOLANT
- (1) CONQUEST 42, 16C COLLET CHUCK, 6" 3 JAW CHUCK, 1 5/8" MAX. SPINDLE CAPACITY, BAR LOADER
- (1) HYUNDAI 20M, LIVE TOOLS, 16C COLLET CHUCK, 10" 3 JAW CHUCK, 4' BAR LOADER
- (1) Okuma model LB15-1SC CNC turning center

## ROTARY TRANSFER

- (1) HYDROMAT HW25-12 transfer machine, 25mm capacity 12 stations

## ACME GRIDLEY'S

- (7) 7/16" RA-6
- (2) 9/16" RA-6
- (1) 9/16" RA-6 SPINDLE STOP
- (5) 1" RAN-6
- (3) 1" RA-6 SPINDLE STOP
- (4) 1 \_" RA-6
- (2) 1 \_" RA-6 SPINDLE STOP
- (1) 1 \_" ACME CHUCKER
- (2) 2" RA-6
- (1) 2 5/8 RA-6

### **PRECISION VERTICAL MACHINING EQUIPMENT**

- (1) Okuma MC-4VA vertical machining center 6000 rpm spindle (16" x 34" table) 20 position tool magazine
- (1) Okuma MC-40VA vertical machining center 6000 rpm spindle (16" x 34" table) 20 position tool magazine
- (1) OKK MCV 520 vertical machining center 20" x 40" travel 30 position tool magazine
- (1) Mori Seiki 503/B40 10,000 rpm, 20" x 40", 30 tools.
- (1) HAAS VF-OE, 7500RPM SPINDLE, 20" X TRAVEL, 16" Y TRAVEL, 20" Z TRAVEL, THRU SPINDLE COOLANT, 4TH AXIS ROTARY INDEXER
- (1) FANUC ROBO-DRILL, 10,000RPM SPINDLE, 19.5" X TRAVEL, 15.75" Y TRAVEL, 13" Z TRAVEL, 4TH AXIS ROTARY INDEXER, 10 TOOLS
- (1) FANUC ROBO-DRILL, 12,000RPM SPINDLE, 19.5" X TRAVEL, 15.75" Y TRAVEL, 13" Z TRAVEL, 4TH AXIS ROTARY INDEXER, 14 TOOLS
- (1) MILLTRONICS VM 17, 8000 RPM SPINDLE, 20" X TRAVEL, 16" Y TRAVEL, 20" Z TRAVEL, HAAS 4TH AXIS ROTARY INDEXER
- (1) FANUC ROBO-DRILL, 8,000 RPM SPINDLE, THRU THE SPINDLE COOLANT, 19.5" X TRAVEL, 15.75" Y TRAVEL, 13" Z TRAVEL, HAAS 4TH AXIS ROTARY INDEXER
- (1) KITAMURA MYCENTER 1Xif ,SPARK CHANGER PALLET 15,000 RPM SPINDLE, THRU THE SPINDLE COOLANT, 20" X TRAVEL, 14" Y TRAVEL, 16" Z TRAVEL,

### **ROTARY INDEXERS**

- (1) HAAS HRT210
- (2) HAAS HA5C

### **PRECISION HORIZONTAL MACHINING EQUIPMENT**

- (1) Okuma MA600-HB 600 MM Horizontal Machining Center
- (1) Okuma MX-40HA 400 MM horizontal machining center 12,000 rpm spindle, 40 position tool magazine
- (1) Tsugami MA-3 lightning horizontal four axis machining center 4000 rpm spindle, pallet loader with 10 pallet capacity

### **CREEP FEED GRINDING**

- (1) Profimat
- (1) Profimat

### **PRECISION GRINDING**

- (1) 20" X 40" Danobat hydraulic surface grinder with electromagnetic chuck & readouts
- (1) DoALL 618 surface grinder with Optidress precision wheel dresser.
- (1) Moore G18 jig grinder
- (1) Unison Dedtru centerless grinding equipment
- (1) DoALL 618 surface grinder
- (1) Brown & Sharpe cylindrical grinder 6" x 24"
- (1) Okamoto 12-24 DX surface grinder
- (1) Okamoto 820 surface grinder

### **WIRE ELECTRICAL DISCHARGE MACHINE**

- (1) Mitsubishi QA20 self threading 5 axis wire EDM. Capable of .002 wire.
- (1) Mitsubishi QA20 self threading 5 axis wire EDM. Capable of .004 wire.
- (1) Mitsubishi FX10K self threading 5 axis wire EDM. Capable of .004 wire.
- (1) Mitsubishi FA10 self threading 5 axis wire EDM. Capable of .008 wire.
- (1) FANUC A-OB ROBOT CUT
- (1) Charmilles model 310 self-threading programmable 5 axis control wire EDM
- (1) 1991 Charmilles Roboform 400 CNC EDM machine, complete with 128-amp generator, C-Axis, and 40 position tool changer
- (1) 2006 Mitsubishi FA10S Wire EDM, 5 axis
- (1) Charmilles HD-20 EDM hole drilling "Hole Popper"

### **Specialty Equipment**

- (1) Harrison 13" x 40" lathe equipped with .0005" digital readouts and gears for metric thread cutting
- (1) MBC 1803 Sunnen production honing machine
- (1) DIMENSION BST 1200 ES Rapid Prototype 3D Printer 10"X10"X10

### **PARTS WASHING EQUIPMENT**

- (1) CAE RANSOHOFF IMMERSO-JET
- (1) OMEGA SONICS SONIC CLEANER

## **PASSIVATION**

(1) ESMA CITRIC ACID PASSIVATION EQUIPMENT 10" X 13" TANKS

## **DEBURRING & FINISHING EQUIPMENT**

(1) EARTH CHAIN HD-750 CL SPINNER

(1) EARTH CHAIN HD-728 SPINNER

(2) TOREX VIBRATORY TUMBLERS 3.5 cu. Ft. AND 6.5 cu. Ft.

## **TOOL ROOM EQUIPMENT**

SMC Contract Division has complete tool room capabilities allowing us to offer in-house mold making, die making and prototyping. For more information contact SMC Contract Sales.

## **INSPECTION EQUIPMENT**

SMC Contract Division has a full range of metrology equipment/capabilities including:

Temperature controlled inspection areas

(1) Numerex co-ordinate measuring machine with Metronics Quadra-Chek 3300

(1) Mitutoyo toolmakers microscope 30x to 300x lenses coupled with a Metronics Quadra-Chek 3300

(1) ROMER-CimCore Portable CMM Model 3000i with 8' arm

(2) QGP Smartscope 500 high speed camera and laser measurement

(1) QGP Smartscope 200 high speed camera and laser measurement

(1) VERTEX 210 MICRO-VU VISION SYSTEM

(1) S-T INDUSTRIES INC VIDEO INSPECTION W/ QUADRA- CHECK 4000

(1) CMI Coating Measurement machine

## **CAD and CAM Systems**

AutoCAD

Feature CAM

Inventor

Mechanical Desktop

Partmaker

Pro/E

SolidWorks