

## CUPPLES' J&J COMPANY EQUIPMENT LIST - 11/13/2009

### DESIGN

5 ea --- [Microstation Software](#) with PC base with dual monitors for machine design (Capabilities include: Auto-cad Dwg, Dxf, Iges, Cgm, Image & Tex)

8 ea --- AutoCad LT 2006 CAD Stations

### PROGRAMMING

14 ea --- CNC Programming Stations using [EZ-Cam Milling, Turning and EDM](#) Programming Software, GIBBS Multi-Axis Milling and Turning and Surfacing; [PEP](#) Laser and Plasma Programming Software, and Tops Trumpf Laser and Punch Programming Software and BySoft ByStronics Laser Programming Software Komatsu Twister Fine Plasma Programming Software.

## CNC - COMPUTER NUMERICAL CONTROLLED EQUIPMENT

### CNC - VERTICAL MACHINING CENTERS

2 ea --- [TRAK](#) DPM SX2 3 axis CNC Bedmills with up to x=32"; y=16"

2 ea --- [TRAK](#) DPM SX3 3 axis CNC Bedmills with up to x=40"; y=20"

7 ea --- [Fadal](#) CNC Milling Machines 40 taper with up to; x=60"; y=30"; z=30"; with Right Angle Heads, and positioning and 3 ea with 4th axis contouring

1 ea --- [KIWA V21i-R 2 APC](#) CNC Milling Machines with Big Plus BT 40 Spindle; 12,000 RPM; x=24.00"; y=16.1"; z=20.1" travels pallets; with Right Angle Heads. Rapids of 2362 ipm; 5 Sec Chip to Chip; 5 sec Pallet Change; 12,000 RPM Spindle; 270 psi thru spindle coolant.

1 ea --- Matsura RAIF CNC Milling Machines with 23.16" x 16.9" pallets; with Right Angle Heads; 5 Degree Pump Style Horizontal Positional Indexers

1 ea --- Matsura RAIII CNC Milling Machines with 31.70" x 16.9" pallets; with Right Angle Heads; 5 Degree Pump Style Horizontal Positional Indexers

1 ea --- [Ares Seiki](#) R Series 450 CNC Drilling and Tapping machine with travels x=17"; y=12"; z=12"

1 ea --- [Ares Seiki](#) A Series 560 CNC Drilling and Tapping machine with travels x=22"; y=16"; z=14"; SMW 1 Degree Horizontal Rotary Indexer

1 ea --- [KIRA](#) VTC40A CNC Drilling and Tapping machine with travels x=47.2"; y=13.8"; z=15.8"; SMW 1 Degree Horizontal Rotary Indexer

1 ea --- [OKK](#) CNC Milling Machine MCV 860; CAT 50 taper with x=81"; y=34"; z=29"

1 ea --- [Okuma](#) MVA 60 CNC; 50 taper machining center with x=60"; y=24"; z=26"; SMW 1 Degree Horizontal Rotary Indexer

1 ea --- Okuma MB-56V VMC with CAT 40 taper, 216 PSI thru the spindle coolant and x=41.34"; y=22.05"; z=18.11"

1 ea --- Mitsubishi MVS 17 Bridge type vertical machining center; CAT 50 taper with; x=122"; y=67.9"; z=53.7"; with 30 taper Right Angle Heads

### **CNC HORIZONTAL MACHINING CENTERS**

1 ea --- Toyoda FH45 ; CAT 40; 450 mm pallets ( 17.7" ) X=23.2"; Y=22.1"; Z=19.7" with 6,000 RPM, 270 PSI Thru the Tool Coolant ; 12 second pallet change; 10 second chip to chip; 4 second full rotation of 360 degree positional 4th axis , 2 APC.

1 ea --- [Kitamura MyCenter HX500i](#) ; Big Plus CAT 50; 500 mm pallets ( 19.7" ) X=34.30"; Y=28.00"; Z=26" with 12,000 RPM, 1,000 PSI Thru the Spindle Coolant ; 6 second pallet change; 6 second chip to chip; 2 second full rotation of full contouring 4th axis with 360,000 positions .

1 ea --- Kitamura MyCenter HX500 ; CAT 50; 500 mm pallets ( 19.7" ) X=34.30"; Y=28.00"; Z=26" with 12,000 RPM, 1,000 PSI Thru the Spindle Coolant ; 6 second pallet change; 6 second chip to chip; 2 second full rotation of full contouring 4th axis with 360,000 positions .

1 ea --- [Mori Seiki NH5000R](#) ; Big Plus CAT 50; 500 mm pallets ( 19.7" ) X=25.6"; Y=23.60"; Z=28.70" with 8,000 RPM, 1,000 PSI Thru the Spindle Coolant ; 6 second pallet change; 6 second chip to chip; 2 second full rotation of full contouring 4th axis with 360,000 positions . Also equipped with Reinshaw Probe System.

1 ea --- [Kitamura MyCenter HX630i](#) ; Big Plus CAT 50; 630 mm pallets ( 24.8" ) X=39.40"; Y=32.60"; Z=28" with 12,000 RPM, 1,000 PSI Thru the Spindle Coolant ; 5.5 second pallet change; 5.5 second chip to chip; 2 second full rotation of full contouring 4th axis with 360,000 positions .

## CNC HORIZONTAL BORING MILL

2 ea --- [FEMCO BMC 110R2](#) ; CAT 50; X=78.74"; Y=70.87"; Z=66.93"; w=21.65" with 2,500 RPM, 270 PSI thru the Spindle Coolant; rotation of full contouring 4th axis with 360,000 positions. Blume Probe System; 60 tool automatic tool changer; full guarding; FANUC 21iC Control; 13,889 Table Load

## CNC TURNING EQUIPMENT

1 ea --- [TRAK TRL 1840SX LATHE](#) 18.5" swing X 40" centers x 9" over the cross slide

1 ea --- Methods Slant Jr. CNC with 14" swing x 11" turning, 1 5/8" bar capacity

1 ea --- [Daewoo](#) Lynx 200B CNC with 11" swing x 11.8" turning, 2" bar capacity

1 ea --- [KIA SKT250MS](#) with 24.4" swing x 28.3" turning length and 16.1" turning dia over the cross slide, 3" Magazine Barfeed thru the front spindle and 2.00 thru the rear spindle. Machine has a main and a sub-spindle with a single turret that can work either spindle. C axis and Y axis up to 4" is also included. Axial and radial tools enable turning and machining in one setup. Machine is equipped with 1,000 PSI thru the tool coolant. This machine also has a FANUC 21i-TB.

1 ea --- [KIA SKT460](#) with 34.4" swing x 62.0" turning length and 24.8" turning dia over the cross slide. Spindle Bore is 5.1". Machine is equipped with a 21" Hydraulic chuck on an A2-11 Spindle. Tail Stock can travel 50.4" and has a MT#5 taper with 5.9" Quill Travel. This machine also has a FANUC 21i-TB.

1 ea --- Methods Slant 50 CNC with 35 3/16" center 19 5/8" swing 2 1/2" thru bar capacity

2 ea --- [Okuma](#) Cadet CNC Lathes with 2 1/2 " thru bar capacity; 28" centers; 18" swing

3 ea --- [Okuma](#) LU 15 - 4 Axis Twin Turret CNC lathe with 2 1/2 " bar capacity; up to 32" turning; 36" centers; 14" swing

1 ea --- [Okuma](#) LCC 15 - 4 Axis Twin Turret CNC lathe with 1 5/8" bar capacity; 14 " turning; 11 " swing

1 ea --- Okuma LT200 Super Big Bore / Big Bore CNC Lathe with 2.76" Magazine Barfeed thru the front spindle and 2.00 thru the rear spindle. Machine has a main and a sub-spindle with upper and lower turrets that can work either spindle. C axis and Y axis up to 3.76" is also included on each spindle/turret. Axial and radial tools enable turning and machining in one setup. Machine is equipped with 1,000 PSI thru the tool coolant.

1 ea --- [Okuma](#) LH 35 2000 - flat bed CNC lathe 24" Swing; up to 78.7" Centers

1 ea --- [Okuma](#) LH 35 3000 - flat bed CNC lathe 24" Swing; up to 118.31" Centers

1 ea --- [Okuma](#) LB35 CNC 24" Swing x 39.37" Centers

2 ea --- [Miyano](#) TMD42 - 3 axis turning centers with LIVE TOOLING on the X and Z AXIS. 42 MM bar capacity with 11" turning

1 ea --- [Miyano](#) LZ-01R - 2 axis turning centers with ROBOT LOADER - 2.75" turning dia x 3.15" turning length

1 ea --- Hardinage Conquest Precision 3 axis turning center with Live Tooling on the X and Z axis. 1 3/8" dia bar capacity with 6" dia x 7" turning capacity.

1 ea --- [Ganesh](#) Cyclone 32CS - 32 mm Sliding Headstock Hybrid 7 Axis CNC Lathe with Subspindle and Magazine Bar Feeder. LIVE TOOLING on Front and Rear Spindles

## **LASER CUTTING EQUIPMENT**

1 ea --- [Amada FO 4020NT](#) - 6,000 Watt Laser with 80" x 160" Pallets capable of cutting 1.25" thick mild steel and 3/4" clean cut for stainless steel equipped with Gorbel / Anver Manual Loading System. Machine has Controlled Pulse Piercing and Water assisted Cutting for thicker plate. System has 4500 IPM Rapid Traverse with 1 G Acceleration.

2 ea --- [Bystronic BySpeed](#) 3015 - 5,200 Watt ARC Laser with 5' x 10' Pallets capable of cutting 1" thick mild steel and 5/8" clean cut for stainless steel equipped with auto-material loaders. Equipped with Rapid Piercing System, 7,000 ipm Rapid Traverse and 3G Acceleration.

1 ea --- [Bystronic ByStar](#) 3015 - 5,200 Watt ARC Laser with 5' x 10' Pallets capable of cutting 1" thick mild steel and 5/8" clean cut for stainless steel equipped with auto-material loaders. Equipped with Rapid Piercing System, 7,000 ipm Rapid Traverse and .6 G Acceleration.

1 ea --- [Trumpf](#) L3050 - 5,000 Watt Laser with 5' x 10' Pallets capable of cutting 3/4" thick mild steel and 3/4" clean cut for stainless steel equipped with auto-material loaders. Equipped with Rapid Piercing System, 11,800 ipm Rapid Traverse and 2 G Acceleration.

1 ea --- [Trumpf](#) L3030 - 4,000 Watt Laser with 5' x 10' Pallets capable of cutting 3/4" thick mild steel and 5/8" clean cut for stainless steel equipped with auto-material loaders.

2 ea --- [Trumpf](#) L3030 - 3,000 Watt Lasers with 5' x 10' Pallets capable of cutting 3/4" thick mild steel and 1/2" clean cut for stainless steel equipped with auto-material loaders.

### **CNC PUNCHING EQUIPMENT**

2 ea --- [Trumpf](#) TC2000R CNC Hydraulic Punching Machine with 50" x 50" (50" x 100" plus with repositioning) travel, capable of cutting up to 1/4" mild steel. Maximum hit rate is 420 hits/minute on 1" centers. Also with tapping capability from #10-24 up to 5/16"-18.

1 ea --- [Trumpf](#) TC2020R CNC Hydraulic Punching Machine with 50" x 100" (50" x 120" plus with repositioning) travel, capable of cutting up to 1/4" mild steel. Maximum hit rate is 420 hits/minute on 1" centers. Also with tapping capability from #6-32 up to 5/16"-18.

### **PLASMA CUTTING**

1 ea --- [Komatsu](#) Twister TFP3051 Fine Plasma Cutting Machine with a 60" x 120" table capable of cutting 1.00" mild steel and 3/4" stainless steel

1 ea --- Koike Aronson CNC Plasma Cutting Machine with a Hypertherm Max 100 plasma capable of cutting 3/4" mild steel and 1/2" stainless steel

### **WIRE EDM**

1 ea --- [Charmilles](#) ROBOFIL 440 Submerged Wire EDM with up to 30 degrees cutting angle at 15.75 inches thickness. Machine has travels of x=21.62; y=13.77; z=15.75.

## **CNC FORMING**

1 ea --- Accurpress 400 Ton CNC Open Side Gap Frame Hydraulic Brake Press with 24" wide x 96" long ram and 30" wide x 96" long bottom die plate. This machine also has a 3 axis ETS 3000 Accurpress CNC Control System with 4 ea extra long fingers.

11 ea --- [Accurpress](#) CNC Press Brakes up to 5 axis and up to - 250 Ton x 12'-0" Machines include Willa Crowning Systems.

1 ea --- CMU CNC Press Brake up to 4 axis and up to - 35 Ton x 48" between frames.

1 ea --- Atek Bantum single axis 12 ton press brake with 24" bed length

## **CNC ROLLING**

1 ea --- DAVI MCA 2019 CNC 4 ROLL CNC ROLL - 1/4" Prebend X 6'0" capacity (5/16" with no prebend).

## **ROBOTIC WELDING**

6 ea -- [Panasonic Robotic Welding Cells](#) with 350 amp cv mig and up to 500 amp pulse welding power supply and up to 7 axis fixed tables , main rotary and independent rotary tables

## **CONVENTIONAL EQUIPMENT**

### **CONVENTIONAL MILLING EQUIPMENT**

18 ea --- Conventional Knee Mills -With (2) Axis readouts - Up to 48" Capacity

1 ea --- #3 Cincinnati with Tool Makers OverArm

1 ea --- #4 Cincinnati with Tool Makers OverArm

1 ea --- G & L Horizontal Milling Machine 12" X 20"

### **CONVENTIONAL TURNING EQUIPMENT**

14 ea --- Conventional Lathes up to 42" swing with 63" gap swing x 17' - 6" B.C.

2 ea --- Warner Swazey #3 Turret Lathes 1 1/2" Dia

2 ea --- Brown & Sharp 2G Screw Machines 1 1/2" Dia

2 ea --- Brown & Sharp Ultramatics 1 5/8" Dia

1 ea --- [Wickman Multispindle](#) 1" Dia Max - 6 Spindle

2 ea --- [Wickman Multispindle](#) 1-3/4" Dia Max - 6 Spindle

### **DRILL PRESSES**

3 ea --- Radial Arm up to 4'

4 ea --- Stand Drill Press

2 ea --- Twin Spindle Drill Stations

1 ea --- Station Automatic Drill Center 1/2" Dia

1 ea --- Horizontal Milling Machine 12" X 20"

1 ea --- 6-Spindle Drill Presses 3/4" Dia

1 ea --- 4-Spindle Drill Presses 3/4" Dia

### **SURFACE GRINDERS**

1 ea --- 48" Dia Blanchard Grinder

1 ea --- 36" Dia Blanchard Grinder

3 ea --- 12" x 24" Surface Grinder

### **BROACHING EQUIPMENT**

1 ea --- LaPoint Type 25 - 8 Ton Horizontal Broach

2 ea --- Davis Key-Seater capable of broaching up to 1 1/2" keyways

### **SAWS**

2 ea --- Cut off Saw - 12" Capacity

3 ea --- DoAll Production Feed thru cut off saw - 12"

1 ea --- [HYD MECH S-20DSP](#) - Double Miter Capable - up 60 degree miter in two directions; 13" x 18" straight; 8" x 10" at 60 degrees

1 ea --- DoAll CNC Production Feed thru cut off saw - 18"

6 ea --- Vertical Band Saw

### **WELDERS**

2 ea --- Automatic Mig Welders with Reiner Rotary Welding Stations

20 ea --- TIG Welders

10 ea -- Mig Welders - CV and Pulse also with Aluminum Pulse Mig welding attachments

2 ea --- Stud Welders up to 3/8" dia

1 ea --- 30 KVA Rocker Arm Spot Welder

1 ea --- [120 kva GE Schmidt press type Spot Welder and Projection Welder](#)

3 ea --- Conventional Plasma Cutters up to 1 1/4" Thick Capacity

12 ea --- Acetylene Welding/Torch Rigs

### **STRESS RELIEF EQUIPMENT**

2 ea --- Formula 62 Stress Relief Machine

### **CONVENTIONAL FABRICATION EQUIPMENT**

3 ea --- [Accurpress](#) Shears up to 1/4" ss and 3/8" mild steel x 10' 0"

4 ea --- Conventional Hydraulic Press Brakes up to 330 Ton x 12'-0"

2 ea --- Piranha iron workers

5 ea --- Rolls up to 3/8" x 60" AND 10 GA X96"

1 ea --- Apkayak APK 100 Angle and Channel Roll - up to 6" x 2-1/2" channel leg in and 4" x 4" x 1/2" angle legs in.

## **STAMPING PRESSES**

1 ea --- Verson Punch Press 45 Ton

1 ea --- Rouselle Punch Press 75 Ton

1 ea --- Rouselle Punch Press 95 Ton with Rapid Air Coil Feed - 12" feed x 12" wide coil x up to 7 ga thickness

## **HYDRAULIC PRESSES**

3 ea --- Up to 75 Ton Dake Press

## **ROD AND TUBE BENDING EQUIPMENT**

2 ea --- Dennison Multi-press 10 Ton

2 ea --- Dennison Multi-press 6 Ton

1 ea --- Pines #3 Pines Bender 1 - 1/8" Dia x .062 wall Tubing

## **DEBURRING EQUIPMENT**

1 ea --- Ultramatic Vibratory Deburring Machine - Wet system with automatic chemical mix, automatic discharge chute, (15" wide channel, 14 inches deep)

1 ea --- Timesaver Wet Belt Sanding system with a 9" wide part capacity.

## **QUALITY ASSURANCE**

1 ea --- Brown & Sharp CMM 24" x 24" Reflex 454

1 ea --- Brown & Sharp CMM 24" X 30" EXCEL; PC-DMIS SOFTWARE

1 ea --- Brown & Sharp CMM 30" X 42" EXCEL; PC-DMIS SOFTWARE

2 ea --- [Brown & Sharp CMM 30" X 42" Global](#) with full articulating probe system; PC-DMIS 4.3 SOFTWARE

1 ea --- [FARO](#) ARM - FARO Gauge - 48" volume with 12" extensions for up to 72" volume for deep or long part accuracy +/- .0004"

1 ea --- [FARO](#) ARM - FARO Gauge PLUS - 48" volume with 12" extensions for up to 72" volume for deep or long part accuracy +/- .0002"

## **TRUCKS/LIFTS/RIGGING EQUIPMENT**

1 ea--- 9 Ton Grove Portable Crane (Can Drive in any 8' x 8' Wide door. Crane has a 30 foot reach, 19 TON CAPACITY)

13 ea --- Forklifts (From 4,000 to 80,000 lb. capacity - 4 each with booms for rigging)

4 ea --- Scissors Lifts

1 ea --- JLG Manlift

1 ea --- Van - 7 Person Capacity

2 ea --- Flatbed - 1 Ton

1 ea --- Flatbed - 2 Ton

1 ea --- Flatbed - 5 Ton

2 ea --- Flatbed - 20 Ton Trailers

2 ea --- Pickups - 3/4 Ton

9 ea --- Pickups - 1/2 Ton

1 ea --- International 10 Wheel Tandom Truck

1 ea --- 104,000 lb. 47' Lowboy Trailer

1 ea --- 40' Covered box truck

Miscellaneous Equipped Gang Boxes to Support Small & Large Field Installations.

**JACKSON TOTAL FACILITIES 95,000 Sq. Ft. Building Capacity.**

**DYERSBURG TOTAL FACILITIES 40,000 Sq. Ft. Building Capacity.**

Complete Tool Crib Facilities.

Plastic, Aluminum, Carbon Steel and Stainless Steel sheet, plate, tubing and bar in stock for most emergency repairs.

All equipment is owned by Cupples' J&J Company.