



## TURNING EQUIPMENT

ID	ID	Machines
		2 HC Hardinge manual chuckers with accessories
		6 Hardinge handscrews model DS-59
F		KINEFAC MC-4 Kine-Roller
K	200	Mori Seiki SL-15 Lathe's, Fanuc 10T controls, 12 stations, 6000 RPM spindle, and tail stock
G	201	Mori Seiki SL-15 Lathe's, Fanuc OT controls, 12 stations, 6000 RPM, and tail stock
O	202	Mori Seiki SL-15 Lathe's, Fanuc OT controls, 12 stations, 6000 RPM, and tail stock
E	203	Mori Seiki SL-15 Lathe's, Fanuc 10T controls, 12 stations, 6000 RPM spindle, and tail stock
I	204	Mori Seiki SL-15 Lathe's, Fanuc 16T controls, 12 stations, 6000 RPM, and tail stock
Q	205	Mori Seiki SL-15 Lathe's, Fanuc 16T controls, 12 stations, 6000 RPM, and tail stock
U	206	Mori Seiki SL-15 Lathe's, Fanuc 16T controls, 12 stations, 6000 RPM, and tail stock
S	207	Mori Seiki SL-15 Lathe's, Fanuc 16T controls, 12 stations, 6000 RPM, and tail stock
J	208	Mori Seiki SL-15 Lathe's, Fanuc 10T controls, 12 stations, 6000 RPM spindle, and tail stock
RR	300	Mori Seiki NLX 2500SY, Live Tool Lathe, 6 axis with auto barfeed
SS	301	Mori Seiki NLX 2500SY, Live Tool Lathe, 6 axis with auto barfeed
NN	302	Mori Seiki NL 2500, Live Tool Lathe, 6 axis with auto barfeed
QQ	303	Mori Seiki NLX 2500SY, Live Tool Lathe, 6 axis with auto barfeed
XX	304	Mori Seiki NLX 2500/700, Live Tool Lathe, 6 axis with auto barfeed
JJ	305	Mori Seiki NLX 2500SY/700, Live Tool Lathe, 6 axis with auto barfeed
	306	Mori Seiki NLX 2500SY/700, Live Tool Lathe, 6 axis with auto barfeed special tooling, High Pressure Through Spindle Coolant, Mitsubishi 730 CELOS Controls
	307	Mori Seiki NLX 2500SY/700, Live Tool Lathe, 6 axis with auto barfeed special tooling, High Pressure Through Spindle Coolant, Mitsubishi 730 CELOS Controls
H	600	Hardinge CHNC II, Fanuc 10 TF controls, 8 stations, and 4500 RPM spindle .0001 resolution
D	601	Hardinge CHNC III SP, Fanuc 18T control, 8 stations, and 4500 RPM spindle .0001 resolution with bar feeder
C	602	Hardinge CHNC II, Fanuc 10 TF controls, 8 stations, and 4500 RPM spindle .0001 resolution with bar feeder
M	603	Hardinge CHNC I, Fanuc OT control, 8 stations, and 4500 RPM spindle with bar feeder
	1000	DMG MORI NTX 2000, Fanuc 35iB Control, 12000 RPM Milling spindle X,Y,Z,B Axis, Twin spindle 2.625 Mac, Bar feeder, Lower Turret 10 station holder, Live tooling feed, 72 tool capacity milling head, etc. high pressure thru spindle coolant.
	1001	DMG MORI NTX 2000, Fanuc 35iB Control, 12000 RPM Milling spindle X,Y,Z,B Axis, Twin spindle 2.625 Mac, Bar feeder, Lower Turret 10 station holder, Live tooling feed, 72 tool capacity milling head, etc. high pressure thru spindle coolant.

## MILLING & DRILLING EQUIPMENT

ID	ID	Machines
		3 Bridgeport's mills Series 1 with digital readouts and accessories
		3 15" Drill presses
OO	100	Mori Seiki NV5000, Fanuc 31i Control 40x20x20 travel 14,000 RPM, 25 HP high pressure thru spindle coolant/air switchable, 5 axis capable.
PP	101	Mori Seiki NV5000, Fanuc 31i Control 40x20x20 travel 14,000 RPM, 25 HP high pressure thru spindle coolant/air switchable, 5 axis capable.

P	102	Matsuura MC-510VF, Yasnac I-80 controls, 22x16x18 travel, 8000 RPM spindle
T	103	Matsuura MC-510VF, Yasnac I-80 controls, 22x16x18 travel, 8000 RPM spindle
II	104	Matsuura MC-510 VF, Yasnac I-80 controls, 22x16x18 travel, and 8000 RPM spindle
A	105	Mori Seiki Dura Vertical 5100, Fanuc Control, 41x21x21 travel, 12000 RPM spindle, high pressure thru spindle coolant
HH	106	Matsuura MC-660, 15,000 RPM Spindle, Yasnac J-300
GG	107	Matsuura MC-660, 15,000 RPM Spindle, Yasnac J-300
R	108	Matsuura MC-800VF, Yasnac I-80 controls, 32x18x19 travel, 8000 RPM spindle, and high pressure coolant thru spindle
X	109	Matsuura MC-800VF, Yasnac I-80 controls, 32x18x19 travel, and 8000 RPM spindle
DD	110	Matsuura MC-800VG, Yasnac J-300 controls, and 10000 RPM spindle PSI high pressure coolant thru spindle
FF	111	Matsuura MC-800VF, Yasnac I-80 controls, 32x18x19 travel, 8000 RPM high pressure thru spindle coolant w/4 <sup>th</sup> Axis
BB	112	Matsuura MC-800VF, Yasnac I-80 controls, and 8000 RPM spindle high pressure thru spindle coolant
EE	113	Matsuura MC-800VG, Yasnac J-300 controls, 32x20x19 travel, 10000 RPM spindle
AA	114	Matsuura MC-510 VF, Yasnac I-80 controls, 22x16x18 travel, and 8000 RPM spindle, PSI high pressure coolant thru spindle
L	115	Matsuura MC-600V, Yasnac MX-3 controls, and 22x16x18 travel
	116	Mori Seiki Dura Vertical 5100, with 4 <sup>th</sup> Axis, Fanuc Control, 41x21x21 travel, 12000 RPM spindle high pressure thru spindle coolant/ air switchable
	117	Mori Seiki Dura Vertical 5100, Fanuc Control, 41x21x21 travel, 12000 RPM spindle, high pressure thru spindle coolant/ air switchable
	118	Mori Seiki Dura Vertical 5100, Fanuc Control, 41x21x21 travel, 12000 RPM spindle, high pressure thru spindle coolant
	119	Mori Seiki CMX 1100V, 15,000 RPM Spindle, Fanuc controls, high pressure thru spindle coolant/ air switchable
	120	Mori Seiki CMX 1100V, 15,000 RPM Spindle, Fanuc controls, high pressure thru spindle coolant/ air switchable, 4+1 axis
	121	Mori Seiki CMX 1100V, 15,000 RPM Spindle, Fanuc controls, high pressure thru spindle coolant/ air switchable, 4+1 axis
	122	Mori Seiki CMX 1100V, 15,000 RPM Spindle, Fanuc controls, high pressure thru spindle coolant/ air switchable, 4+1 axis
TT	400	Mori Seiki NHX 5000 (5 Axis), 12,000 RPM spindle, Mitsubishi 750 control, high pressure thru spindle coolant/ air switchable
	401	Mori Seiki NHX 5000 (5 Axis), Mitsubishi 750 Controls, 12,000 RPM 40hp high torque spindle with high pressure thru spindle coolant/ air switchable
Z	402	Mori Seiki NHX 5000, Mitsubishi 730 with CELOS Controls, 15,000 RPM 40hp high torque spindle with high pressure thru spindle coolant/ air switchable
	403	Mori Seiki NHX 5000, Fanuc Control, 20,000 RPM 40hp high torque spindle with high pressure thru spindle coolant/ air switchable
W	500	Matsuura MX-520, 5-Axis Vertical machine, Fanuc 31i controls, 24.8x22.04x20.07 travel, 20,000 RPM spindle, high pressure coolant.
	501	DMG MORI DMU 60 FD DUO Block Seimens 840D Solutionline 5 Axis W/vertical turning, 18,000 RPM HSK spindle with high pressure thru spindle coolant/ air switchable
	502	Matsuura MX-850 5-Axis Vertical , Fanuc 31i controls,35.43x30.70x25.59 travel, 20,000 RPM spindle, high pressure coolant.
	503	DMG MORI DMU 80 FD Seimens 8400 Solutionline 5 Axis W/vertical turning, 20,000 RPM HSK spindle with high pressure thru spindle coolant/ air switchable

	504	DMG MORI DMU 50 Seimens 840D Solutionline full 5 Axis W/vertical turning, 20,000 RPM spindle with high pressure thru spindle coolant
	505	DMG MORI DMP 70 Seimens 840D control, full 5 axis, 56 max Newton/Meter torque, 24,000 RPM Spindle, 27.5X16X15 travel, attached to 40 pallet EROWA system robot.
	506	DMG MORI DMP 70 Seimens 840D control, full 5 axis, 56 max Newton/Meter torque, 24,000 RPM Spindle, 27.5X16X15 travel, attached to 40 pallet EROWA system robot.
	507	DMG MORI DMU 80 FD Seimens 8400 Solutionline 5 Axis W/vertical turning, 20,000 RPM HSK spindle with high pressure thru spindle coolant/ air switchable
	508	DMG MORI DMU 125 FD Seimens 8400 Solutionline 5 Axis W/vertical turning, 20,000 RPM HSK spindle with high pressure thru spindle coolant/ air switchable
	509	Kern Micro HD With EROWA Systems Solutions Robot Compact 80
CC	700	Mori Seiki MV-65B, Yasnac I-80 controls, 60x27x26 travel, 6000 RPM CAT-50 spindle
Y	701	Mori Seiki MV-65B, Yasnac I-80 controls, 60x27x26 travel, 6000 RPM CAT-50 spindle, and high pressure coolant thru spindle
V	702	Mori Seiki MV-65A, Yasnac I-80 controls, 50x27x26 travel, 4500 RPM CAT-50 spindle
	703	DMG MORI NVX-7000 Fanuc 31i control 61X29X26 travel, 10,000 RPM CAT-50 spindle w/ high pressure thru spindle coolant
B	800	Matsuura MC-560V with 4th axis, Yasnac MX-3 controls, 22x16x18 travel, and 6000 RPM spindle
N	801	Matsuura MC-800V with 4th axis, Yasnac MX-3 controls, 32x19x19 travel, and 6000 RPM spindle

## SWISS EQUIPMENT

ID	ID	Machines
WW	900	CITIZEN A32-2M7P
UU	901	CITIZEN L20X 9 Axis with CITIZEN CAV20-LE-IS Bar Feeder
	902	CITIZEN L-12 with CITIZEN CAV12-LE-IS Bar Feeder
MM	903	Star SR20, Swiss, 7 axis with auto barfeed
LL	904	Tsugami SS20, Swiss, 8 axis with auto barfeed
	905	CITIZEN L-12 with CITIZEN CAV12-LE-IS Bar Feeder
	906	CITIZEN L-12 with CITIZEN CAV12-LE-IS Bar Feeder
	907	CITIZEN L32-1M12 with CITIZEN CAV12-LE-IS Bar Feeder
	908	CITIZEN L12-1M7 with CITIZEN CAV12-LE-IS Bar Feeder
	909	CITIZEN L12-1M7 with CITIZEN CAV12-LE-IS Bar Feeder
	910	CITIZEN L12-1M7 with CITIZEN CAV12-LE-IS Bar Feeder
	911	CITIZEN L20EIX with barfeeder
	912	CITIZEN L-12 with CITIZEN CAV12-LE-IS Bar Feeder
	913	CITIZEN L-12 with CITIZEN CAV12-LE-IS Bar Feeder
	914	CITIZEN L20x with CITIZEN CAV20-LE-IS Bar Feeder
	915	CITIZEN M32 with CITIZEN CAV32-M5E-IS Bar Feeder
	916	CITIZEN L-20 with CITIZEN CAV20-LE-IS Bar Feeder
	917	CITIZEN L-20 with CITIZEN CAV20-LE-IS Bar Feeder

## MISCELLANEOUS EQUIPMENT

#	Machines
1	Behringer 313 Band Saw
	Grinders and Sanders

1	EROWA systems Solutions Robot Compact 80, 40 pallets, attached to Machines 505 & 506
1	Tumbler MFI Model HZ-40
1	Tumbler MFI Model HZ-85
1	Raytech Centrifugal Magnetic Finisher Model CMF-1200
2	Sandblaster TRIONCO Model 36/BP
1	Pole Parmer Ultrasonic Cleaner Model #08895-76
1	Pole Parmer Ultrasonic Cleaner Model #08895-13
1	Makita high pressure air compressor (400 PSI) for pressure testing
3	AUTOCRIB Robocrib VX500, TX750, VX1000
1	Clark PWX40 8000 lb. Battery powered pallet jack
1	Toyota 6000 LB Fork lift with barrel attachment
1	Aichi SV1930C Lift
1	Universal Robot UR-3
1	Zoller Venturion 450/6 Pre-setter
1	Haimer Powerclamp i4.0 Heat shrink tooling
1	Pregis Intellipack Bagger (foam packer for shipping)
1	Spanco Moveable Crane 250 lbs.
2	Tennant Floor Burnisher
1	Tennant Floor Sweeper 6100
2	Floor Scrubber TENNANT 5280 and T5

## BUILDING

#	70,000 square feet plus Mezzanine storage
1	Coffing Overhead Hoists 10,000 lbs. Serial # 47009
1	Coffing Overhead Hoists 2,000 lbs. Serial # 46768
1	Coffing Overhead Hoists 2,000 lbs. Serial # 47184
1	Cleanroom Clean Line 164-S
2	DI Water systems for Coolant and Cleanroom
	Water filters on water supply and DI water
1	DESPATCH Annealing Oven Model # PWD2-52-2E
1	DESPATCH Annealing Oven Model # TAD2-52-1E1
1	LANDA Evaporator for coolant burn-off and oil recycling
1	EMC Evaporator for coolant burn-off and oil recycling

## COMPRESSED AIR

1	121 HP Atlas Copco G90 Direct Drive Compressor
1	75 HP screw compressor Atlas Copco Model GA55 VSD
1	50 HP screw compressor Atlas Copco Model GA37 VSD (Back-up)
1	50 HP screw compressor Atlas Copco Model GA 37 (Back-up-downstairs)
1	20 HP screw compressor Atlas Copco Model GA 15VSD+
1	1000 gallon bulk storage pressure tank
1	Air dryer and Air filters Atlas Copco Model FD410 with Atlas Copco PD 120 filter
1	Air dryer and Air filters Atlas Copco Model FD610 with Atlas Copco PD 120 filter
1	SPM Compressor lifecycle monitoring (bearings/motor harmonics monitoring)

1	10 HP vacuum pump system Atlas Copco GHS 350VSD+
1	21 HP Atlas Copco Vacuum Pump GSH 900 VSD+

## INSPECTION

#	Machines
1	HEXAGON METROLOGY OPTIV Performance 443 Dual Z Programmable CMM
1	Brown and Sharpe Image 7107 Programmable CMM
1	TESA Microhite 474 Manual CMM
2	Mitutoyo Crysta-plus M574 Manual CMM
1	Global S-Blue 9-20-8 Programmable CMM
2	Deltronic Optical Comparator
1	ST Industries 2450 Optical Comparator
1	Keyence IM-6225
1	Surfcom 120A Surface Roughness Analyzer
1	Mitutoyo SJ-210 Surface Roughness Analyzer
3	Tool Makers Scopes
	Micrometers
	Granite surface plates & height masters
	Bore gages, Thread gages, Pin sets, Microscopes, and accessories
	Misc. Inspection Hand Tools
2	Marposs
2	Sunnen gage
1	Particles Plus Handheld laser Particle Counter Model # 8303

**EMPLOYEES:** # of Employees 130 (as of October 2022)

**CERTIFICATIONS:**

ISO Certified 9001:2015  
ISO AS9100:D (2016)

ISO Certified 13485: 2016  
ISO 6/Class 1000 Cleanroom