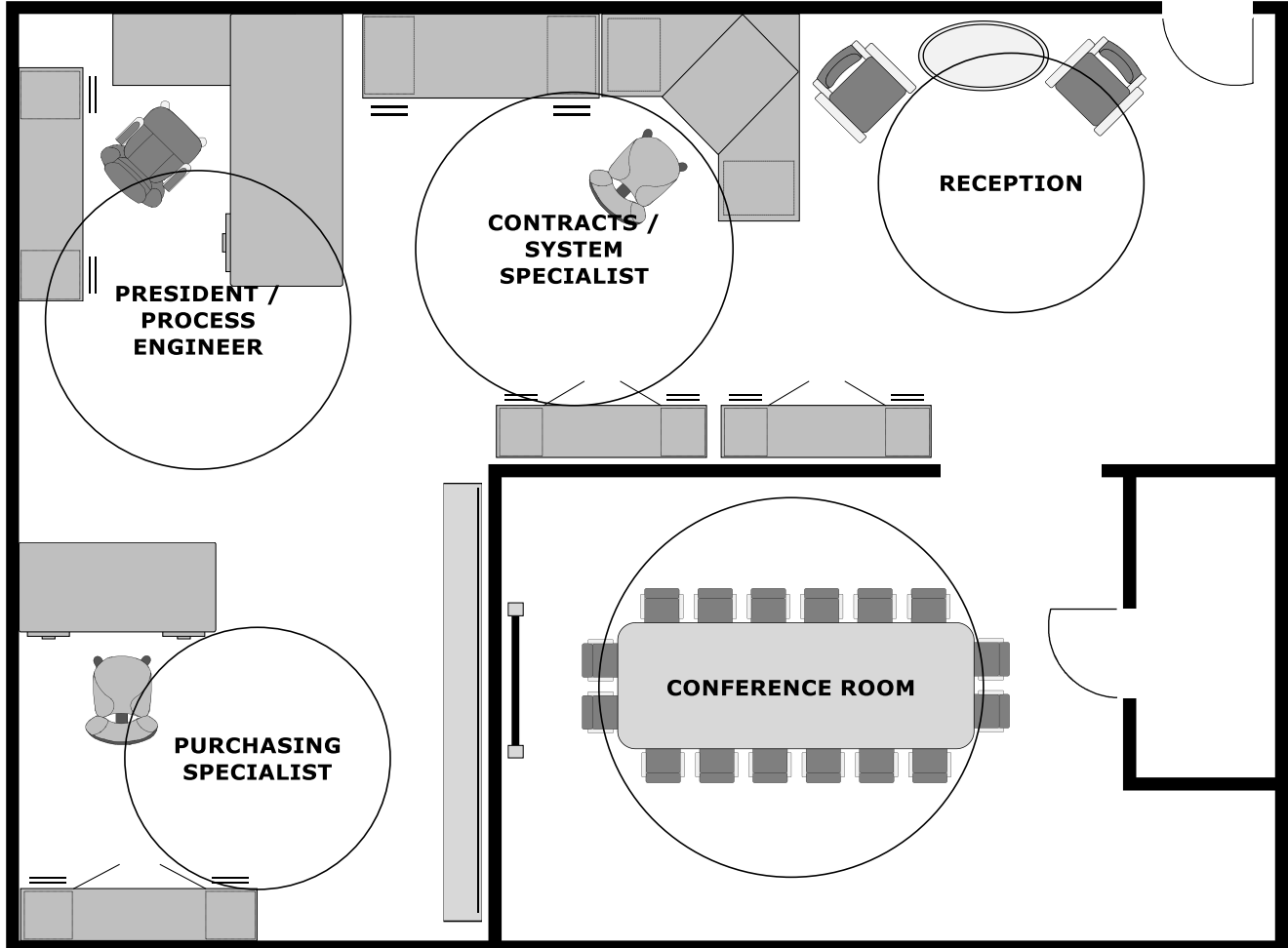


SHOP AREA

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Section/Owner:	System Support/System Specialist	
Reviewed and Approved by:	Denny Karas/President	Date: 05/18/17



OFFICE AREA

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SHOP AREA FACILITIES

CNC LATHES:

- 1 **(DOOSAN)**
CNC Doosan Puma 240B Turning Center 25 H.P.
2 ½ " Bar Capacity
8 " Chuck Capacity
12 Station Turret

- 1 **(MIYANO)**
CNC Miyano Turning Center 15 H.P.
1 ¾" Bar Capacity
6" Chuck Capacity
8 x 2 Station Turret

- 1 **(EMCO)**
CNC Emco Maier Turning Center 20 H.P.
1 ¾" Bar Capacity
6" Chuck Capacity
8 Station Turret

- 1 **(KIA 2)**
CNC Kieturn 15 Turning Center 15 H.P.
1 5/8" Bar Capacity
6" Chuck Capacity
12 Station Turret

- 1 **(OKU labeled as KIA1 on drawing)**
CNC Okuma Genos L250E Turning Center 20 H.P.
2" Bar Capacity
8" Chuck Capacity
12 Station Turret

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SHOP AREA FACILITIES (CONTINUED)

1 **(KIA 3)**
CNC SuperKiaturm 21B Turning Center 20 H.P.
2 1/2" Bar Capacity
10" Chuck Capacity
12 Station Turret

1 **(KIA 4)**
CNC SuperKiaturm 15 Turning Center 20 H.P.
1 3/4" Bar Capacity
8" Chuck Capacity
12 Station Turret

MANUAL LATHES:

1 **(HARDINGE)**
Hardinge Super Precision Chucker
1" Bar Capacity
6" Chuck Capacity
8 Station Turret w/ Threading Attachment

1 **(SHELDON)**
Sheldon 13" Engine Lathe

1 **(CLAUSING)**
Clausing 13" Engine Lathe
6 Station Turret Attachment

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SHOP AREA FACILITIES (CONTINUED)

CNC MILLING MACHINES :

- 1 (FADAL 1)
CNC Fadal VMC40 Machining Center
21 Station Automatic Tool Changer
16" x 39" Table
4th Axis Turning Table
- 2 (FADAL 2 and FADAL 3)
CNC Fadal VMC15 Machining Center
21 Station Automatic Tool Changer
16" x 29.5" Table
- 1 (MV Jr)
CNC Mori Seiki MVJr. Machining Center
16 Station Automatic Tool Changer
16" x 35.4" Table
Computer Controlled Indexing Head

MANUAL MILLING MACHINES:

- 1 (BRIDGEPORT 1)
Bridgeport Milling Machine
12" x 42" Table w/ Power Feed
- 1 (BRIDGEPORT 2) *not shown in diagram*
12" X 42" Table w/ CNC retro-fit and snap-change tool changer
- 1 (WELLS)
Wells-Index Milling Machine

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12" x 48" Table w/ Power Feed

SHOP AREA FACILITIES (CONTINUED)

MISCELLANEOUS PRODUCTION EQUIPMENT:

1 Precision Surface Grinder, Chevalier

1 Precision Surface Grinder,

1 Diamond Precision Tool Grinder

1 Automatic Band Saw, Cosen

1 Band Saw, Wells

1 Vertical Band Saw,

1 Lead Screw Tapping Machine

10 Drill Presses

Tapping Attachments

Precision Servo Micro-Drill Press

Turn Tables

Indexers

Dumore Grinding Attachment

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Boring and Facing Heads

Etc.

INSPECTION EQUIPMENT:

- 1 Statistical Process Control Computer
- 1 Keyence IM-6025 Instant Measuring System
- 1 14" Optical Comparator w/ Metrology Computer .0001 Increment
40 x Lens
- 1 14" Optical Comparator, Starrett, w/ Metrology Computer .00001 Increment
20 x Lens
- 1 12" Optical Comparator
20 x and 50 x Lens
- 1 Starret Master Surface Plate 18" x 24"
- 1 Surface Plate Grade 2 18" x 24"
- 2 Johnson Thread Gage Systems
- 1 Johnson Internal Thread Gage System
- 1 Hardness Tester
- 1 Thread Trend Gaging System
- 2 Digimatic Data Processors

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- 5 Internal Bore Micrometers .075" thru 4.0"
- 1 Set Dial Bore Gage .05" thru 6.0"
- 1 Surftest Surface Finish Gage
- 2 Digimatic Height Gage 12"
- 1 Edmund Air Gage .000020" Resolution
- Digimatic Micrometers, Digimatic Calipers, Digimatic Indicator
- Micrometer Sets 0-6"
- Screw Thread Micrometers
- Disc, Anvil, Blade, Point, Depth Micrometers
- Calibration Grade Gage Block Sets
- Production Grade Gage Block Sets
- Plug Gages .011" thru 1.000" (.001 increments)
- Thread Plug Gages, Thread Ring Gages (various sizes)
- 100 power Microscope .00010" Resolution
- Sine Plate, Sine Bar, Square, Protractor, Special Indicators
- Etc.

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OFFICE EQUIPMENT / PRODUCTION SUPPORT EQUIPMENT

- 1 Gateway Computer Server
Windows 2000 Server operating system
- 7 Networked Computer Workstations
Windows 98/ XP/ Vista/ Windows7 operating system
- 1 MasterCam 9.0 CAD/CAM NC programming software
- 1 QuickLink DNC software
- 1 Peachtree Accounting software
- 1 Visual EstiTrack ERP Shop Management software

Karas Enterprise Management System Software

Ample Storage Locations for WIP, Finished Goods, Raw Material, Special Tooling, etc.

Ample Storage for Paper Files, etc.

Workbenches, Conference Area, etc.

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