



Midwest Molding Capability Profile

1560 Hecht Drive, Bartlett, IL 60103 (P) 224.208.1110 (F) 224.208.1111 www.mwmolding.com



MIDWEST MOLDING, INC.
REGISTERED TO ISO-9001/TS-16949
CERTIFICATE NO.: A4939

Midwest Molding Management
4/15/2010

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Manufacturing Location/Corporate Headquarters:

1560 Hecht Drive
Bartlett, Illinois 60103

Phone 224.208.1110

Fax 224.208.1111

www.mwmolding.com

Facility Information:

120,000 square foot facility with an ultra modern, hospital like clean facility with state of the art equipment.

Engineering Capabilities:

Capability to design in house using Pro-Engineer's "Advanced Designer Package". This software is running on a UNIX platform and on the HP C 110 Workstation. One seat of Unigraphics (version 18) runs on a Windows NT (version 4.0) platform. All plotting is done on the HP Design Jet 750C ("E" size color plotter). All these tools make a powerful package for Product Design and Development. We also are capable to perform a mold flow analysis.

Quality:

The list of Quality Control equipment has been attached with this document. We are ISO-9000/TS-16949 certified with our 3rd party registration with Underwriters Laboratories. We are also ISO-14000 certified.

Molding Expertise:

MWM specializes in the following areas of molding:

- Insert and Composite Molding
- Reel to Reel Continuous Strip Molding
- Straight Plastic Injection Molding
- Two-Shot Molding / Premold-Overmold
- In-mold decorating (IMD)
- Gas Assist
- Wire Harness Assembly
- Multi-Component Assembly
- Sonic Welding
- Vibration Welding

In addition, we can mold pre-mold and over-mold using the same or two different types of plastic. Our capabilities also extend to over-molding several assembled parts. For parts requiring miniature components, we can bring inserts onto a carrier and mold onto a continuous strip. These types of parts can be shipped on reels or as per customer needs. We have also implemented principles of lean manufacturing, JIT inventory management for customer inventory, and work cell manufacturing.

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List of Molding Capital Equipment:

Insert Molding:

- 2 40 Ton Autojector vertical shuttle injection molding machines with a built in closed loop process control system and SPC package.
- 1 90 Ton Autojector vertical shuttle injection molding machine with a built in closed loop process control system and SPC package.

Injection Molding:

- 19 Horizontal Injection Molding machines, from 35 tons to 200 tons, with a totally closed loop control system and SPC package built in. In addition, barrel heats are programmable for up to 7 days. All horizontal machines have built in software capability to adapt to an automatic reject chute. This list includes a 220 ton Krauss Maffei 2 shot molding machine
- 2 300 ton Toyo all electric molding machines
- 5 500 ton Toyo all electric molding machines. This list includes 1-500 ton 2 shot molding machine.
- 4 750 ton Toyo all electric molding machines

Drying Equipment:

- 35 Dryers, one for each press, plus one back-up

Mold Temperature Control Units:

- 38 Mold temperature controllers with a Compu-Mate 4000 controller programmable for 7 days.

Grinding Equipment:

- 35 Granulators, one for each press, plus one back-up.

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Automatic Equipment:

- 15 Robots
- 17 Sprue Pickers

Material Handling Equipment:

- 6 Electric powered forklifts
- 1 Overhead crane used for quick mold changeover with a 10 ton capacity, two bridge and double hoists for tool room convenience

Cooling Tower System:

- 3 12 ton Micro gel units ranging from 30 F to 250 F
- 1 240 ton cooling tower system manufactured by Frigel
- 2 7 ton Applied Process Equipment controller

Tooling / Maintenance Equipment:

- 2 Mitsui Grinders with Sony digital readouts and Magnetic Walker Magnets.
- 1 Standard Bridgeport milling machine with digital readout
- 2 Prototrak Bridgeport Milling Machines.
- 1 Mitutoyo Toolmakers Microscope with a digital readout.
- 2 Ellox EDM machines
- 1 Charmilles Isopulse 80 EDM.
- 1 Nikon Projector V12 Comparitor.
- 1 GS Cutter Grinder.
- 1 Sandblaster.
- 1 Solvent Tank.
- 1 Darex Drill Sharpener.
- 1 1st Class Assembly Table with an overhead crane, Cap. 3 tons.
- 1 Torit Sucker/ Vacuum System.
- 1 Suburban Tool Master Grind with C-5 collets.

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Cable and Harness Division

We are fully equipped to do cutting, stripping, tinning, terminating, and harnessing of wires:

- Twist pairs, triples, and quads
- Cut, strip to length, and tin dip
- Spiral stripping, lettering, and numbering
- Automotive, electronics, commercial, industrial, wire harnessing, cabling, and tubing

Harness Equipment

Komax	K034 programmable cutting and stripping system with job storage capability up to 200 jobs.
Kingsley	Model SL-14 SE-14 remotely operated wire marking machine using a type wheel.
Eubanks	4600 programmable ribbon cutting machine.
CT	Automatic taping machine for harnesses.
Komax	Speed-O-Matic 3 ton press with crimp force monitor.
Komax	Speed-O-Matic 5 ton press with crimp force monitor.
AMP	Amp-O-Lectric Model K Press# 565435-5.
Molex	TM 42 Press.
Cablescan	Continuity tester model 256/PC.
Chatillon	TCM-201 test stand with Chatillon DFM-100 digital force gauge.
Carpenter	#47A Manually operated flat cable stripper.
TRW	Hand fed coil winder.
Artos	CS6 wire cut and strip machine two-plane wire straightner.
Eraser	Model LS10, AR0240 heavy cable stripper.
Molex	HTR-1719-C Hand tool.
Molex	HTR-2262 Hand tool.
Molex	AM4700-31G Arbor press with AM60561 universal adapter plate.
Mark	10 G1001 wire terminal grip.
Mark	10 G1007 universal grip.
Packard Electric	Hand crimping tool.
AMP	Pneumatic connector assembly tool.
Steinel	HL 1502 S heat gun for shrink tubing.
Esico	No.20 solder pot for tinning.

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WI Wall	Model WE 100 heavy-duty soldering iron.
Panavise	Model 396 universal holding fixture.
KG Devices	UTL flat ribbon cable separator.
8-50-0113	Dies
8-50-0105	Dies
2- Schaefer Technologies	Crimp press EPS 2000 with crimp force monitor.

List of Quality Equipment

Brown & Sharpe	Coordinates measuring machine MVAL 343 1T-MAN4 Microval 343 CMM.
Micro Vu	Vector 18 x 24 matrix series: <ul style="list-style-type: none">• Cross Generator• Geometrical Box• Z Auto Focus• Auto Edge Detector
Micro Vu	H-14 series Comparitor: <ul style="list-style-type: none">• Geometrical Box• Auto Edge Detector
Nikon	Microscope
Starrett	Surface plate
Meyer	Model P-O 0.011/0.060 Gauge pins
Meyer	Model M-1 0.064/0.0250 Gauge pins 0.0015-0.035 Filler gauges
Mitutoyo	Caliper
Mitutoyo	Micrometer
Mitutoyo	Mac cal electronic digital caliper
Mitutoyo	Dial indicator
Mitutoyo	Drop indicator
National	Sine bar
Brown & Sharpe	1-2-3 Gauge block
Tinius Olsen	Melt flow indexer. Extrusion Plastometer Model# MP993.
OHAUS	Scientific Scale