November 2007

Manufacturing Technologies Sector Profile[1] - Upper Midwest, USA

Quick Facts

Market Highlights

- Exports of Canadian industrial machinery to the region totalled over $1 Billion[2] in 2006
- Active roster of Canadian manufacturers playing a key role in the supply chain of many local manufacturers.
- Well established infrastructure of roads and rail promote efficient movement of cross-border goods.

Opportunities

- Diverse base of local manufacturing companies presenting excellent partnering and supplier opportunities.
- Manufacturing companies actively leveraging R&D and innovation to maintain competitiveness.
- Canada's geographic proximity to the region is an advantage in meeting the on-demand needs of the region's manufacturers.

Business Environment

- Business culture in Minnesota is very similar to Canada's.
- The manufacturing economy of the region is very integrated with that of Canada with many companies conducting business on both sides of the border.
- There are no tariff barriers to the importation of manufacturing products into Minnesota.
- The regional community views Canadian equipment as innovative, highly productive and reliable.
-

1. Sector Overview

The manufacturing sector is a powerful economic engine in the US Midwest. The region's diverse manufacturing base is home to many successful companies representing vastly different segments of the manufacturing economy. Leading companies throughout the region are engaged in the manufacture of industrial equipment, food products, recreational vehicles, doors and windows, chemicals, printing, paper, packaging, medical devices, plastics and aerospace and defense. Each of these manufacturing sectors has unique opportunities and challenges and this market report will focus specifically on the industrial equipment manufacturing industry within the five states of Minnesota, Iowa, Nebraska, North Dakota and South Dakota.

Although all five states boast a healthy manufacturing industry, Minnesota and Iowa are home to a great deal of the region's industrial manufacturing activity. Minnesota is headquarters to 20 Fortune 500 companies including notable industrial manufacturing giants 3M, Donaldson, Pentair and Graco. Although these companies operate familiar brands around the globe they are in fact the exception within the state. A key defining characteristic of Minnesota's manufacturing economy is that it is overwhelmingly dominated by small businesses. More than 90 percent of the state's manufacturing companies have less than 100 employees. There are over 8,000 manufacturing companies in Minnesota employing more than 345,000 people. The state's manufacturing industry runs the largest total payroll of any business sector in Minnesota with an average wage per manufacturing employee of USD$50,000.

Iowa too is home to industrial manufacturers including major commercial refrigeration equipment manufacturers Barker Company, IMI Cornelius and Hussmann Taylor Industries. Manufacturing is Iowa's largest industry, contributing USD$19 billion annually to the state's economy and comprising 25 percent of the Gross State Product. The industry also employs over 230,000 Iowans at more than 4,200 manufacturing companies.

Canadian companies with operations in the region include Magna (Dieomatic) in Iowa, Alcan Packaging in Nebraska, Fleetwood Metal/Starcan in South Dakota, Empire Machinery and Tools in North Dakota and New Flyer in Minnesota. There are also countless Canadian manufacturers that play a vital role in the global supply chain of many regional manufacturing companies.

In 2006, the United States as a whole received over $17.7 Billion of Canada's manufactured machinery[3] products. Canadian exports in this sector to the five-state Upper Midwest region totalled just over $1 Billion:

	2002	**2003**	**2004**	**2005**	**2006**
Minnesota	312,341	312,769	354,680	430,462	409,436
Iowa	196,107	153,025	188,129	274,487	257,398
North Dakota	230,221	201,256	211,983	231,377	178,847
Nebraska	117,391	74,754	83,646	90,461	95,178
South Dakota	48,545	46,725	62,589	62,566	70,206
Total	904,604	788,530	901,026	1,089,353	1,011,066

The same year saw Canada import almost $2.3 Billion of manufactured machinery products from the U.S. Upper Midwest. Of this, over $1 Billion can be attributed to the state of Iowa:

	2002	**2003**	**2004**	**2005**	**2006**
IOWA	822,994	864,664	955,796	979,673	1,083,451
MINNESOTA	529,731	513,669	519,829	601,146	596,737
NORTH DAKOTA	216,490	217,312	173,895	244,984	291,324
NEBRASKA	126,146	114,132	121,504	186,129	235,445
SOUTH DAKOTA	55,391	55,413	67,006	67,047	87,495
TOTAL	1,750,752	1,765,190	1,838,029	2,078,977	2,294,453

Canadian companies should note the following trends taking place within the regional industrial manufacturing industry:

- Flexible and Automated Assembly Lines - Companies will look to produce multiple products on a single line or facility. Manufacturing techniques like programmable robots instead of fixtures will allow manufacturers to more easily scale production to meet changing demands.

- Accelerated Product Innovation - Manufacturers will rely on increased R&D and innovation to respond to increasing customer demands and accelerate speed to market.
- Outsourcing of Non-Core Competencies - Manufacturers will continue to keep their differentiators in-house, while non-core competencies like warranty programs will be outsourced. Manufacturers will look to outsource complete modules or systems, rather than parts of their line.
- Going Green - Manufacturers will evaluate new standards and incorporate green practices into their processes. However meeting sustainability requirements will likely be a costly endeavour further diminishing profits.
- Supply Chain Visibility - Companies are seeking transparency throughout the supply chain to increase the cost effectiveness and efficiency of sourcing, manufacturing and movement of goods around the globe.

2. Market and Sector Challenges - Strengths/Opportunities:

Proximity to Canada

The Upper Midwest's obvious strength is its proximity to the Canada-U.S. border. There are also 12 border crossing points between North Dakota and Manitoba. The Emerson, MB/Pembina, ND crossing is the second busiest international border crossing point in Western Canada/U.S., with almost 400,000 commercial crossings each year. The annual value of trade passing through Emerson/Pembina is approximately $14 billion.

Minnesota currently shares 7 border crossings with Manitoba and Ontario. The Pigeon River Bridge crossing, midway between the Lake Superior ports of Duluth, MN and Thunder Bay, ON is a key trade gateway for the Upper Midwest.

Ease of Transportation

Movement of materials through Customs on a timely basis can be challenging during peak times (e.g. at the end of financial quarters). Minnesota and North Dakota's geographical location gives firms doing business in the state the flexibility to import and export goods through Customs offices at either Minneapolis or Chicago, thereby reducing reliance on only one Customs point.

Exporters of large machinery should be aware, however, that some points of entry into the United States may have a gate which is too small to fit an oversized load through. When deciding on a route, please consult the U.S. Customs and Border Patrol office at your chosen point of entry to ascertain whether the gate will be large enough to fit a load through. A list of the point of entry offices (with contact details) can be found at http://www.cbp.gov/xp/cgov/toolbox/ports/.

There are no special regulations for an oversized load crossing the border. A Customs and Border Patrol agent at the point of entry office will supply information regarding paperwork required.

There are varying regulations for transporting oversized loads on highways in the Upper Midwest. Please contact the Consulate General of Canada in Minneapolis for information.

Similarity to Canada's Business Environment

Canadian manufacturing companies enjoy a good reputation in the U.S. market. Traditionally, manufacturers use manufacturers' reps or distributors to sell their products and some companies have set up their own distribution, warehouse or assembly facilities in the U.S.

Local Manufacturing Associations:

- Minnesota Precision Manufacturing Association: http://www.mpma.com/
- Manufacturers Alliance: http://www.mfrall.com/
- Tri-State Manufacturers Association: http://www.tsma.org
- Arrowhead Manufacturers and Fabricators Association: http://www.amfa-mn-wi.org
- MN Manufacturing Coalition/MN Chamber of Commerce: http://www.mnchamber.com

Trade shows play an important role in introducing and promoting equipment to the marketplace. Some trade shows offer demonstration sites, which are especially good for introducing new features or new equipment. The Canadian Consulates General in the U.S. can assist you in determining the best shows for your equipment.

Opportunities for Canadian Companies

Canadian products entering this territory are judged, for the most part, on their own merits. Design, price, quality, availability, ease of doing business and prompt service are the most important factors that buyers assess in viewing a new resource or partner. Canadian companies may benefit from the general perception that equipment built in Canada is seen as innovative, highly productive and reliable.

As stated earlier, the majority of Minnesota's manufacturing companies have less than 100 employees which often indicates that they operate with more agility and creativity than the larger manufacturers. These small and mid-sized manufacturers can be more open to strategic partnering, evaluating innovative material sources and incorporating new technologies into their R&D and manufacturing processes.

Regional manufacturers are also seeking to bolster core product lines and expand their geographical reach prompting some companies to evaluate acquisition candidates while others are looking to divest in underperforming business units. And across the board, industrial manufacturing companies are trying to figure out how to get the most out of their IT and people investments.

Weaknesses/Threats:

The regional industrial manufacturing sector is large and diverse, but most sector players face similar challenges. Increased costs for oil, natural gas, steel and copper are squeezing margins, unless offset by pricing and surcharge increases. Customer reluctance to invest in new equipment has intensified the importance of after-market service. Additionally, a decline in workforce skills and availability further challenge the industry's growth and competitiveness.

In November 2007, the Canadian Dollar hit an all-time high against the U.S. Dollar. This has adversely affected the number of US companies importing from Canada. However the current economic environment presents Canadian manufacturers with an opportunity to make key capital investments to improve efficiency and productivity.

3. Sub-Sector Identification

The industrial equipment sector is itself a sub-sector of a broader manufacturing industry. For more detailed information about other sub-sectors please contact the Consulate General of Canada in Minneapolis.

Canadian Government Contacts

Consulate General of Canada in Minneapolis
E-mail: katherine.saba@international.gc.ca
Internet: http://www.minneapolis.gc.ca

Foreign Affairs and International Trade Canada
125 Sussex Dr.
Ottawa, ON K1A 0G2
Internet: http://www.infoexport.gc.ca

Useful Internet Sites

- Minnesota Precision Manufacturing Association: http://www.mpma.com/
- Manufacturers Alliance: http://www.mfrall.com/
- Tri-State Manufacturers Association: http://www.tsma.org
- Arrowhead Manufacturers and Fabricators Association: http://www.amfa-mn-wi.org
- MN Manufacturing Coalition/MN Chamber of Commerce: http://www.mnchamber.com
- Great Lakes Manufacturing Council: http://www.greatlakesmanufacturing.org/
- Canadian Manufacturers and Exporters: http://www.cme-mec.ca/
- National Association of Manufacturers: http://www.nam.org

---

[1] *The Government of Canada has prepared this report based on primary and secondary sources of information. Readers should take note that the Government of Canada does not guarantee the accuracy of any of the information contained in this report, nor does it necessarily endorse the organizations listed herein. Readers should independently verify the accuracy and reliability of the information.*

[2] *All monetary amounts are expressed in Canadian dollars, unless otherwise indicated. Foreign exchange rate is based on CAD$1 = USD$1.07 on November 6th, 2007.*

[3] *NAICS Code 333*