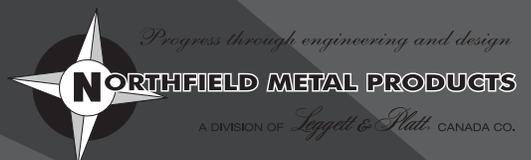


# NORTHFIELD METAL PRODUCTS

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**CUSTOM METAL & PLASTIC COMPONENT  
MANUFACTURING SINCE 1974**

**PROGRESS** *through engineering & design*



## WHO WE ARE

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Northfield Metal Products, located in Waterloo Ontario Canada, has been proudly servicing the office chair industry for over 40 years.

Although our foundation was built on the design and manufacturing of office furniture components, our expertise expands far beyond the office furniture industry. With our 320,000 square foot facility and years of business experience, Northfield is now recognized around the globe as a custom metal component manufacturer and custom plastic injection component molder.

With representation placed strategically in North America, United Kingdom, Europe and Asia, Northfield is well respected in the world market.

Northfield is dedicated to our customers through the development and production of the highest quality components. We continually strive to meet and exceed the rapidly changing expectations of today's business world.

## WHY CHOOSE NORTHFIELD?

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**REPUTATION** For over 40 years we have worked successfully with industry leaders to efficiently and effectively manage projects to completion.

**DISTRIBUTION** Northfield can manage inventory to meet your fluctuating volume requirements. Whether it's the warehousing of your products, utilization of our fleet vehicles making localized deliveries, or shipping World Wide from our door to yours, we have consistent capacity to move goods to market on time.

**TECHNICAL KNOWLEDGE & LEADERSHIP** Creating progressive, precision-engineered tools and components designed for an ever-changing marketplace.

**QUALITY** Our quality management system is assessed yearly by NSF International and accredited to ISO 9001:2008 standard.

**PERSONALIZED CUSTOMER SERVICE** Northfield Products is committed to meeting your business needs. Our commitment to quality, competitive pricing and friendly, responsive customer service elevates us above the competition.





## STAMPING DEPARTMENT

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Our stamping department supports over 70 presses ranging up to 600 tons. Northfield's precision metal stamping service has the equipment, expertise and experience to deliver tight tolerance cost effective parts in both low and high volume quantities. Our capabilities encompass many production techniques including single station and progressive die stamping, coining and deep drawing. Having a full service facility enables us to produce and maintain all tooling, in turn allowing total control over quality and cost. Utilizing our coil and bar-feed presses, we are able to work with a wide variety of steel grades and compositions.



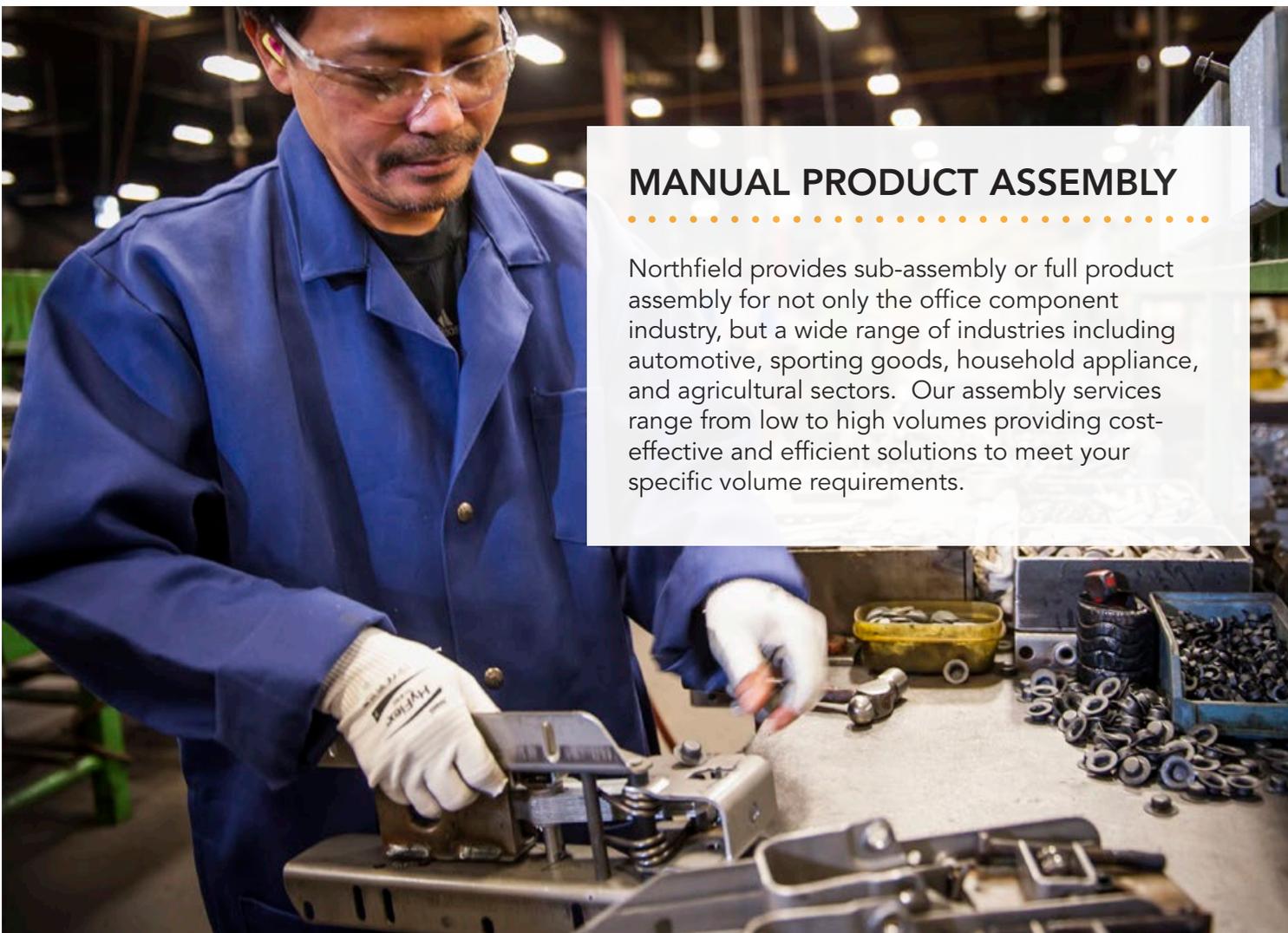


## WELDING DEPARTMENT

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Whatever your project demands, we possess the capability to complete your requirements efficiently and accurately.

Our many robotic and manual welding stations with both MIG and TIG welding capability provide flexibility to weld complex weldments in a variety of part sizes for low to high volume production runs.



## MANUAL PRODUCT ASSEMBLY

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Northfield provides sub-assembly or full product assembly for not only the office component industry, but a wide range of industries including automotive, sporting goods, household appliance, and agricultural sectors. Our assembly services range from low to high volumes providing cost-effective and efficient solutions to meet your specific volume requirements.

## PLASTIC INJECTION MOLDING

Northfield operates over 40 plastic injection molding machines ranging from 40 to 1000 ton capacity (up to a 130 ounce shot). A variety of engineered resins are utilized in our products, as well custom injection molded parts for the automotive, agricultural, electrical, medical, dental, beauty and household sectors. We routinely operate on a multi-shift basis which minimizes unnecessary press shutdowns/startups, lowers our operating costs, and maintains the capacity necessary for high volume requirements.

**Insert Molding / Overmolding:**  
Northfield currently insert molds and over molds numerous types of components including plastics, bushings, shafts, stampings, and screw machine part. Insert molding and over molding are highly efficient methods of reducing assembly and labor costs, increasing reliability, and improving design flexibility.

Our experienced team possess the ability to run a large variety of materials including; ABS, Nylon, Polypropylene, TPE, Polycarbonate, Acetal, HDPE, LDPE, and PVC.







## SCREW MACHINES

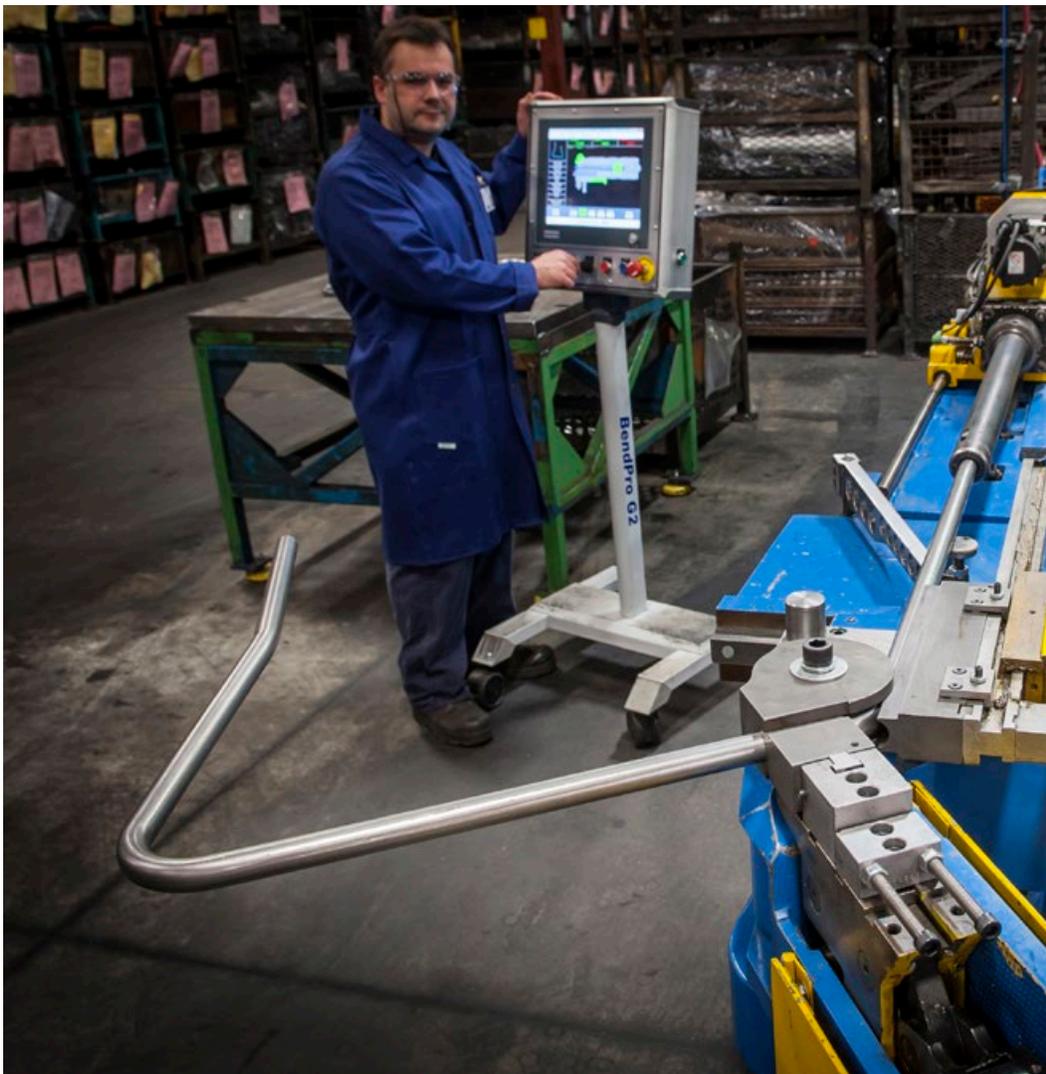
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Our automatic screw machine department consists of multiple machines permitting us to efficiently manufacture very precise small to medium sized parts (up to 2 inches in diameter) in large production volumes. These single and multi-spindle screw machines enable us to perform many types of secondary operations right on the machine eliminating the need for extra operations. All this translates to cost savings for our customers without having to sacrifice quality and consistency.

## TUBE/WIRE BENDING

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Northfield has the capability to meet your tube and wire bending needs utilizing our manual and automated multi-axis machinery. Our facility is equipped to bend various material gauges and alloys.





## ELECTROSTATIC POWDER COAT LINES

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Northfield easily handles high-volume projects while adhering to stringent quality standards at a competitive price utilizing fully automatic tribo technology.

We currently operate 2 automated powder coat lines and overhead conveyer systems enabling the efficient coating delivery of multiple parts simultaneously. A variety of finishes on metal and plastic are available and range from smooth, textured, matte, gloss or metallic.

Powder coating is applied as a free-flowing, dry powder and does not require solvents to keep the binder and filler parts in liquid suspension form. A wide range of finishes can be consistently achieved that otherwise would not be possible through conventional painting methods.

Finished pieces offer excellent resistance to corrosion, heat, impact, abrasion, UV and extreme weather. Northfields powder coating process is environmentally friendly; emitting zero volatile organic compounds (VOC), and does not produce hazardous waste or use of solvents.





## ENGINEERING RESOURCES

**Design and Development** In addition to providing high-quality products in an ever changing market, Northfields engineering department is here to support customer projects from concept to manufacture. Our dedicated team of in-house designers utilizes advanced technologies to assist you with part design, tool quotation, material selection, and manufacturing readiness. We use SolidWorks Design Software, an industry recognized standard in three-dimensional modeling software to create and refine products for manufacture.

**Reverse Engineering** Our In-house Faro Laser Arm Scanner utilizing Geo Magic software enables us to scan dies and molds in order to recreate tooling and scan existing product to recreate surface data. We can then export scanned data into Solidworks for digital manipulation.

**Prototyping** We possess the capability of In-house rapid prototyping utilizing ABS resin for part design and sample approval purposes.



## LOGISTICS

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Northfield specializes in service-oriented shipping in order to provide domestic and international companies hassle free delivery of products. We are able to simplify the shipping process for new and existing customers by handling all logistics inclusive of export documentation to customs clearance forms. We understand the value of timeliness and cost-effectiveness. From our door to yours, with consistent capacity to move goods to market on-time.





## TOOL ROOM

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Our in-house tool room is staffed with licensed tool and die makers, injection mold makers, and machining technicians with design / build capabilities. Our machinery ranges from conventional mills, lathes, and surface preparation equipment to the latest in CNC mills (Mastercam), plunge EDM and Wire EDM's.

Northfield will work closely with you to evaluate options and modify part designs to make precision stamping dies & injection molds that produce both functional and economical finished parts.

Our capabilities include modification and repair of existing tools and ongoing tool maintenance. We are also capable of CNC machining initial prototypes, samples and production parts.

From quick-turn aluminum molds for prototypes and short runs to robust steel progressive dies for high volume production, we design and build the exact tooling that will meet all your requirements. Whatever your application, Northfield will bring quality, integrity and decades of experience to serve your tool design, construction and maintenance needs.



## TEST LAB

In the world of consumer products, testing requirements continually evolve and the office furniture industry is no exception. Our in-house mechanical testing lab is regularly assessed and accredited by Standards Council of Canada to meet the requirements of ISO/IEC 17025:2005 standard covering the field of testing for ANSI/BIFMA x 5.1 General Purpose Office Chair Tests.

Northfield continually tests our extensive and diverse product line to meet the latest industry requirements. Whether it is current product, or an opportunity to approve a new design or design modification, Northfield can find a cost effective solution to help you gain the competitive advantage of meeting the latest BIFMA (x 5.1 General Purpose Office Chair Tests) standards.



## RESEARCH & DEVELOPMENT

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Our R&D department is staffed by experienced technicians with strong product and market knowledge. They are able to assist with the design and development of new products, as well as provide solutions to your product related issues. From development, to testing, to sampling, the R&D department at Northfield is here to support our customer's needs.

## MAINTENANCE DEPARTMENT

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Our team of licensed millwrights is available (and on call) to install, assemble and repair plant machinery and equipment on and off site.

Our Maintenance Department capabilities extend far beyond scheduled machinery service and repair. Our knowledgeable staff holds responsibility for Preventative Maintenance Programs, Machinery Upgrades, Machinery Relocation, Machinery Rebuilds, and Mechanical Process Implementation utilizing Automation and Robotics.

## PARTNERED SERVICES

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SLS Rapid Prototyping Services

Chrome Plating / Zinc Plating/ Autophoretic Coating

Precision Spring and Wire Forms

Foam Molding

Heat Treating

Lock Patching

Water Jet Cutting

Laser Cutting

FEA and Flow analysis for Molds

Mold and Die Design







## NOTES



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**BIFMA**  
INTERNATIONAL

Manufacturer certifies  
that this product meets  
or exceeds applicable  
ANSI/BIFMA standards.



ISO 9001:2008



*Progress through engineering and design*

**NORTHFIELD METAL PRODUCTS**

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[www.northfieldmetalproducts.com](http://www.northfieldmetalproducts.com)

**OFFICE FURNITURE COMPONENTS GROUP**

Northfield is a member of the Leggett & Platt Office Furniture Components Group (OFG).  
These partners can be found at [www.leggett.com](http://www.leggett.com)