Products and Capabilities
Intelligent Material Handling

IMI

Breakthrough Engineering
Breakthrough Engineering for a Better World

Norgren is part of global engineering organization IMI plc. Norgren is at the forefront of delivering the solutions we need in a changing world and is focused on creating tremendous value by solving key industry problems in attractive markets and employing the best.

Norgren has a proud history of creating innovative engineering solutions in precise motion control and fluid technology, and we collaborate with our customers across more than 50 countries in critical areas such as Factory Automation, Material Handling, Rail, Energy, Process Control, Life Science and Commercial Vehicles.

From improving speed, productivity, reliability and efficiency of equipment, to generating significant energy and cost savings, or lowering total cost of ownership across many industries, Norgren’s high-quality solutions are designed to help customers pursue progress, achieve new goals and overcome problems.

With market-leading industry expertise, we offer the capability, resources, engineering intelligence and global support infrastructure to tackle the largest project demands.

Our world-class portfolio of fluid and motion control products include Norgren, Buschjost, FAS, Herion, Kloehn, Maxseal and Thompson Valves. Supplied either individually or combined into powerful customised solutions to meet customer needs.

Breakthrough engineering you can count on.
ISI designs the "Iron Hand", the first hand clamp to pick up panels and stamped parts

Syron opens for business, manufacturing Double Blank Analyzer Systems and Control Panels

ISI joins IMI

Erie begins designing integrated tooling (IT) systems

ISI launches the "Path Finder" capable of fully parabolic transfers, with "Magic" software for press optimization

Syron launches Versa tooling

Syron & Eric joins IMI

Norgren Integrates into IMI Precision Engineering’s Auto in-plant Vertical

New P&S indirect sensor released

ISI launches the BLU (belt lift unit), the first automatic 2-axis press loader and unloader

Ethernet DBA and transforming tooling launch year

Celebrating the 20th anniversary of our press room grippers

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Robotic Systems

Industries:
Aeronautical
Automotive
Moulding
Food and Packaging
Consumer Goods

Applications:
Industrial Robots
Collaborative Robots
Gantry Systems
CNC Tending
Assembly
Fabrication
Palletizing

Capabilities:
We design and manufacture intelligent products for Material Handling pick and place systems. We specialize in grippers, vacuum, modular end of arm tooling, custom structural components, robotic tool change couplers, and sensors. All products are designed and made in the USA. In addition to standard off-the-shelf products, we customize product offerings for every application.

Grippers
» We have a wide range of angular and parallel grippers used in automation tasks such as pick and place, material transfer, clamping, and indexing; all fit to move any material.

Vacuum
» Our wide range of vacuum products include cartridges, pumps, amplifiers, conveying, cups and fittings, and end-of-arm tooling, fit to optimize your material handling needs.

Custom Structural Components
» Norgren is a leader in Carbon Fiber Structures: custom-made to optimize your business, carbon fiber is lighter and stronger than steel, and is easily repairable.
Capabilities, continued:

Tool Change Robotic Couplers
  » Norgren Easy Load tool changers are a perfect addition to robots for quick tool changes. The simple drop-and-release mechanism allows for safe, easy, and ergonomic tool changing within seconds.

Sensors
  » Norgren has multiple sensors to meet your business’s needs, including material measurement sensors which allows your tooling to measure and detect whether multiple objects have been picked up at once; saving you from costly machine repairs.

Custom Products
  » Our Application Engineering team can design and develop your special equipment to accommodate part shapes or space requirements for your application. Common custom projects include linear slides, tipper, rotary or spreader units, tooling carts, turnover stations, and nesting systems.

Product Examples
1. Transforming Tooling/T-bot for packaging
2. Dispensing tool for electronics potting
3. Vacuum system for palletizing
4. Plug and play cobot vacuum tool
5. Custom robotic bottle gripper
6. Modular End of Arm tooling for cobot
7. Modular Mounting system for industrial vision and lighting
Optimized Press Room

Industries:
- Aeronautical
- Automotive
- Agricultural Equipment
- Commercial Vehicle
- White Goods

Applications:
- Destacking
- Interpress
  » Tandem
  » Transfer
  » Tri-Axis
  » Crossbar
  » Dedicated Rail
- End of Line Assembly
- Welding
- Hot Metal

Capabilities:
With over 70 years of expertise in the automotive press room, we can make your metal stamping operations the industry’s best. From die and automation design, to the latest tooling products, we maximize cycles per minute, reduce startup time, and increase overall equipment effectiveness in the press room.

We offer the following:
- Automation Study (Finger Integration Package)
  » Places gripper, cup, or end of arm tooling with the part and press curve to optimize throughput
- Curve Creation
  » Process considers die components, part shape, and press capabilities to design motion curves that optimize throughput
- Tooling Design with Tooling Integration Review
  » Provides optimized tooling design and comprehensive review to eliminate interference issues during home line tryout, including die rework machining costs
Capabilities, continued:

Documentation

» 2D documentation provides information for build, reorder of spare parts and setup of the panel and press

Hard Tool Check

» Verifies the finger integration review changes have been completed by the die design/build source to ensure optimized throughput

Tooling Assembly

» Ensures tooling is built exactly to the design parameters for plug and play startup. Ready for installation at the plant with less than one hour setup

Simulation

» Optimizes transfer curves, identifies clash or clearance issues and adjusts for maximum throughput, all within a real time running visual tool

Launch Support

» Installation and support at your plant to ensure a quick startup

» Management of your project from order through startup

Product/Service examples

1. Hot Metal Stamping Tooling
2. Easy Load Tool Changer
3. Press Room Gripper
4. Crossbar Tooling System on Storage Cart
5. Press Curve Generation Service
6. Dedicated Rail Conversion to Easy Load Tool Changer
7. Press Transfer Simulation
8. Carbon Fiber/Easy Load Transfer Structure
Industries:
Automotive
Aeronautical
Moulding
Food & Packaging
Consumer Goods

Applications:
Gripping
Lifting & Rotating
Processing
Palletizing

Capabilities:
We create special machines to help you pick and place your materials and optimize your operations. By listening to your business’s needs and challenges, our best-in-class engineering team will work with you to create custom solutions.

We offer the following:
Automation Study
» Optimizes the material movement through the process

Engineering/Design
» Custom solutions based on engineering principle and use of modular components: mechanical, electrical, and pneumatic controls
» Scheduled design reviews to ensure deliverable provides customer needs
Capabilities, continued:

Simulation
» Provides visual motion planning to ensure the process is robust

Documentation
» 2D or 3D documentation to support the build, maintenance, and operation of the equipment

Assembly
» Full assembly with buyoff

Launch Support
» Installation and support at your plant to ensure a quick startup

Project Management
» Management of your project from order through startup

Product Examples

1. Custom braze machine with indexing gripper stations
2. Custom pedestal mounted quality inspection station incorporating Norgren Nut Sensors
3. Custom 180 degree servo-controlled turnover station with complete control integration
4. T-bot destacking system: Adaptive Transforming Tooling with full controls
Industries:
Aeronautical
Automotive
Moulding
Food & Packaging
Consumer Goods

Applications:
Carbon Fiber
Grippers
Modular Tooling
Tool Changers
Vacuum

Grippers
Angular Grippers
» Provide an economical solution for the most simple material transfer applications
Parallel Grippers
» Allow for the holding of an object which will be manipulated
Bolt On Gripper
» Allows for more versatile gripping, bolt on any jaw to your gripper to better meet your needs

Carbon Fiber Structures
Built in Rochester Hills, MI, our Carbon Fiber Structures are perfectly suited for your end of arm robotic applications.

Design & Manufacture
» Lightweight, durable, and sturdier than aluminum or steel
» Can be molded into complex shapes or long structures

Repair:
» Doubles the strength of the structure where the break happened
» Save money by repairing structures instead of replacing them after breaking

Configure to any shape or size
**Modular Tooling**

Norgren’s modular tooling is suitable for high-speed robotic applications. Lightweight with strong tubular steel links, our tooling systems allow for faster robot speeds and capacities.

**Versa**
- Ball to ball clamps allow infinite rotational adjustment
- Rated to 250 ft-lbs static, & 100 ft-lbs dynamic loads

**Mounting Systems**
- Perfect for vision, lighting, sensing and dispensing
- Tightly secures in place to resist shaking or imprecise movements

**Vacuum**

Norgren has a large line of vacuum cups to meet all of your material handling needs. Ranging from specialty food handling cups and fittings to packaging and sheet metal, our cups come in various styles, sizes and shapes, with fittings available individually or as a cup assembly.

- Cups
- Vacuum Generation
- End of Arm Tooling Vacuum Systems

**Easy Load Tool Changers**

Does your business frequently change out tooling on your robotic applications? The Norgren Easy Load tool changer system is perfect for robotic coupling! Simply align the hook and snap your tooling into place.

- Compact size, low profile
- Easiest tool changer for fast tooling set-up or changeover
- Mounted to the face of the rail
- One-touch installation; no manual connection required
Norgren operates four global centres of technical excellence and a sales and service network in 50 countries, as well as manufacturing capability in Brazil, China, Czech Republic, Germany, India, Mexico UK and the USA.

For information on all Norgren companies visit

www.norgren.com

Supported by distributors worldwide.

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Due to our policy of continuous development, Norgren reserve the right to change specifications without prior notice.

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