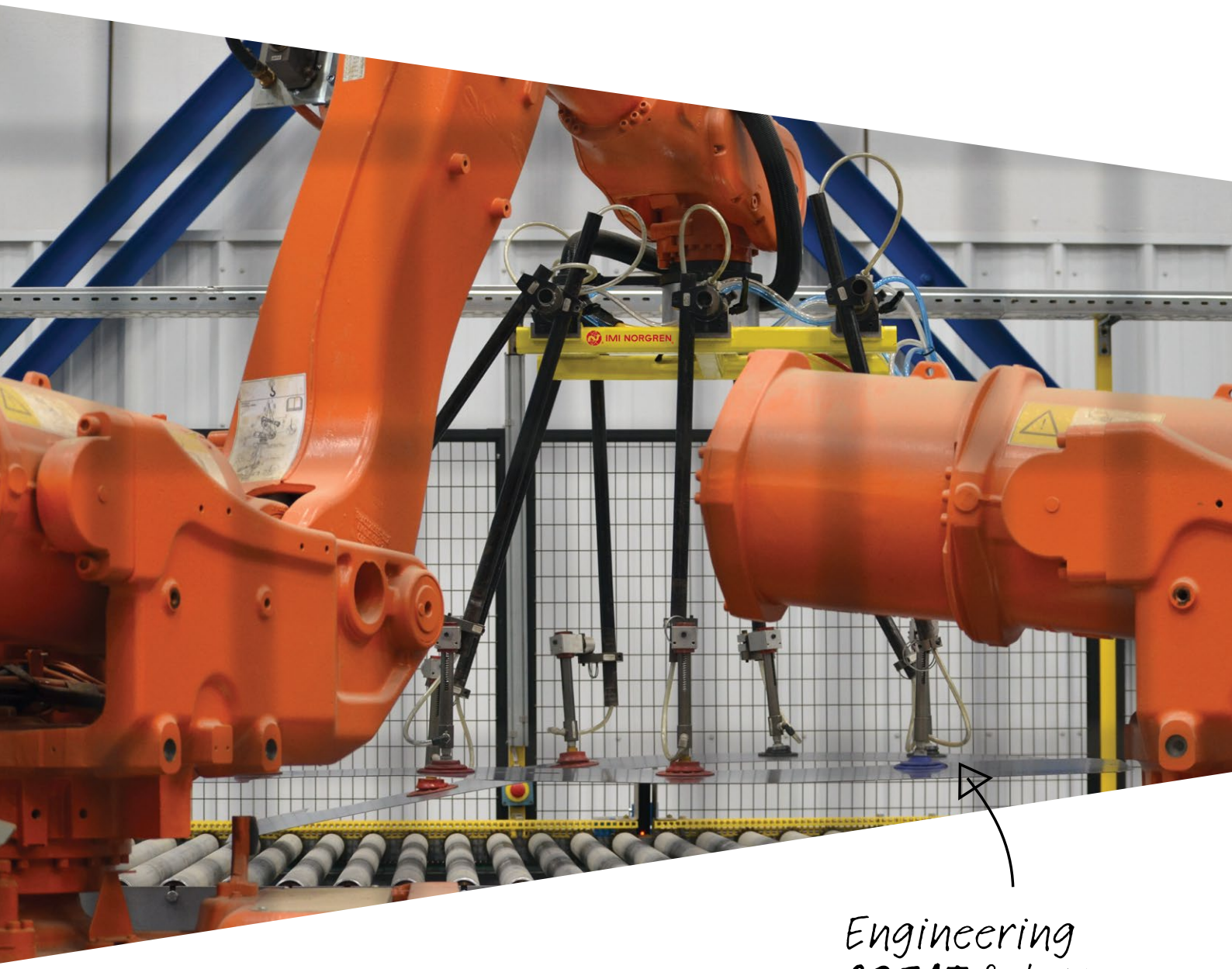
IMI NORGREN

Automate Efficiency
Optimizing Design and Tooling



Engineering **GREAT** *Solutions*

IMI Precision Engineering

Contents

Engineering GREAT solutions through people, products, innovation and service

IMI Precision Engineering is a world-leader in fluid and motion control. Building close, collaborative relationships with our customers, we gain a deep understanding of their engineering needs and then mobilise our resources and expertise to deliver distinctive products and solutions.

Wherever precision, speed and engineering reliability are essential, our global footprint, problem-solving capability and portfolio of high performance products enables us to deliver GREAT solutions which help customers tackle the world's most demanding engineering challenges.

> **Reliability**
We deliver and support our high quality products through our global service network.

> **High performance products**
Calling on a world-class portfolio of fluid and motion control products including IMI Norgren, IMI Buschjost, IMI FAS, IMI Herion and IMI Maxseal. We can supply these singly, or combined in powerful customised solutions to improve performance and productivity.

> **Partnership & Problem Solving**
We get closer to our customers to understand their exact challenges.

Automating Efficiency for Maximum Throughput

For over 65 years, IMI Precision Engineering has been a partner to automotive OEMs and Tier suppliers, solving pressroom automation problems and increasing press profitability. The company focuses on automation design, modular tooling and tooling integration for Tri-axis, Tandem and Crossbar presses, as well as welding operations.

> **Integrated Tooling and Automation**
World class press automation requires the integration of die and tooling designs from the earliest stages of part development. Our applications group designs, builds and installs highly productive tooling packages that increase press throughput, reduce setup time or downtime and improve ergonomics and safety.

> **Full manufacturing capabilities**
From front of line to end of line, our sensors, grippers, carbon fiber components, finger tooling and vacuum cup solutions are designed and built to last in the most challenging press environments.

> **Engineering Solutions**
Engineering GREAT solutions for our customers is at the heart of everything we do. We help customers gain an advantage through increased output, reduced energy usage, lower cost of ownership and speed to market.

UK
Fradley, Bristol,
Leeds & Poole

Sales & Service across Europe

- IMI Precision Engineering sales, manufacturing and technical centres
- IMI Precision Engineering sales locations

Engineering
GREAT Solutions


Europe
CZECH REPUBLIC
Brno
GERMANY
Alpen

Automation Products

IMI Precision Engineering provides automation design and modular tooling for press lines in the automotive industry. With experience in die engineering and automation design and tooling, IMI Precision Engineering is the industry leader for Tandem, Cross bar, Tri-axis and Hot forming press.
In addition to automation design and assembly, IMI Precision also manufactures receivers and adapters, carbon fiber structures, sensors, grippers, finger tooling and vacuum products for the automotive stamping and assembly process. Through the IMI Precision Engineering group and other channels,we can support customers globally.

PGS Grippers

- Size for size, delivers the best grip force in its class
- Fastest actuation time of 0.05s close/ 0.09s open
- Features a hardened steel chassis making it extremely durable
- Double blank and part present sensors available

PGS Hot Metal Grippers

- Operates in temperatures up to 1652°F (900°C), with rear-mounted pneumatics and specially tempered gripper pads to ensure longer service life and maximum performance.

Sensors

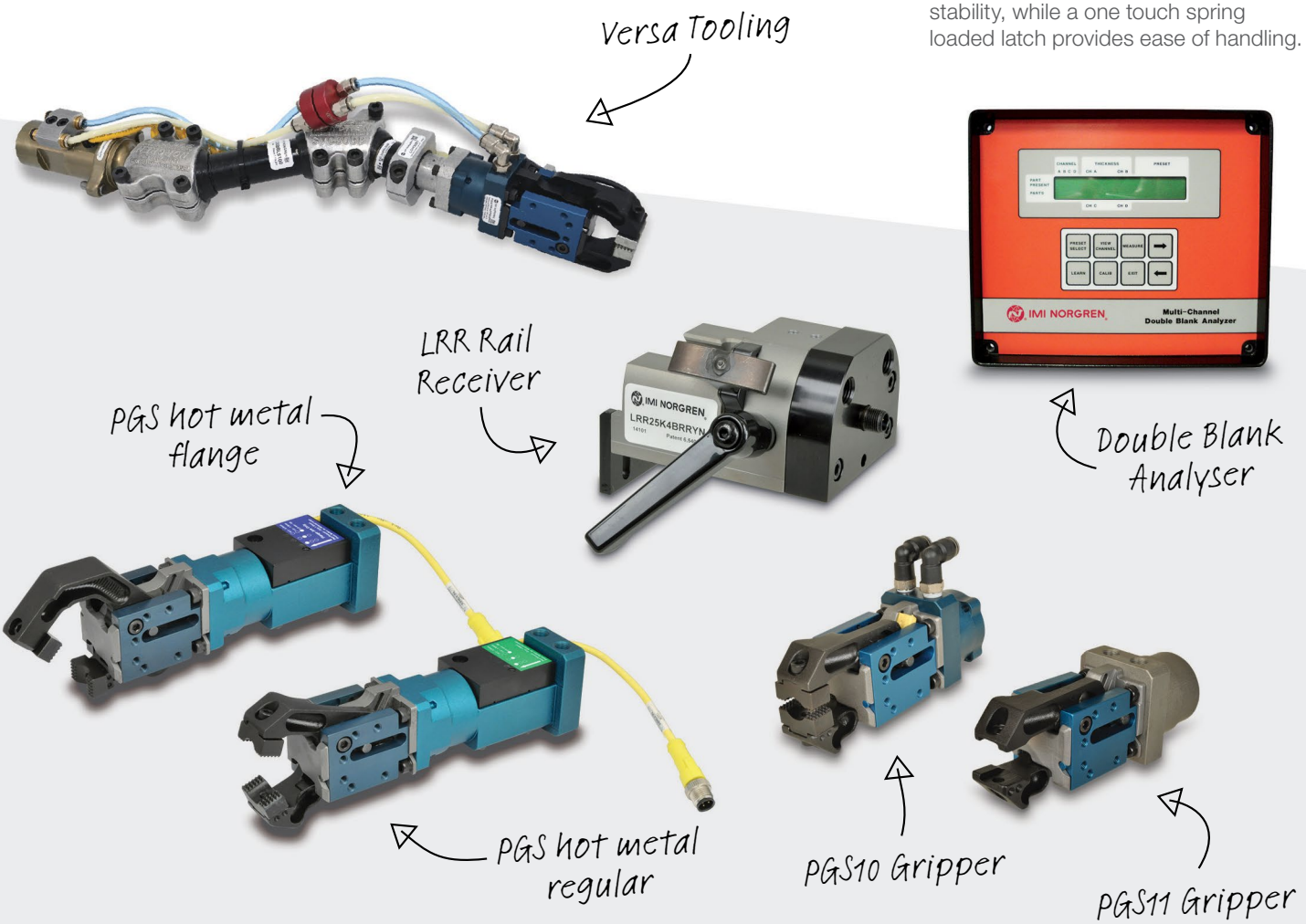
- **Double Blank Analyzer (DBA) System** protects dies and stamping machinery by detecting multiple blanks during the load sequence. Pass through and contact style sensors available, with multichannel controller that has DeviceNet capability.
- All stainless steel **Nut Sensors and Stud Sensors** detect missing or unthreaded nuts or studs, to prevent defective parts from processing and avoid downtime.

Modular Tooling

- **Versa** is comprised of high strength tubular steel links coupled with aluminum ball-to-ball clamps that provide maximum flexibility to the fingers rated for 250 ft. lb static/100 ft. lb. dynamic loads.
- **Featherweight tooling** is lightweight, increasing the robot's capacity to move at a much faster speed. The new design is up to 70% lighter than traditional tooling.

LRR Rail Receiver

- Quick-change tooling mount/ docking device that allows quick change of transfer fingers during job change. Steel locating pins ensure rotational stability, while a one touch spring loaded latch provides ease of handling.



New Products

Transforming Tooling

This is industry's only automation tooling that can transform between jobs and accommodate multiple panels. With user user-friendly controls, the system ensures reduced change over time, optimised pick point placement, improved safety and eliminates the need for costly floor storage.

COMING SOON

EZ Load

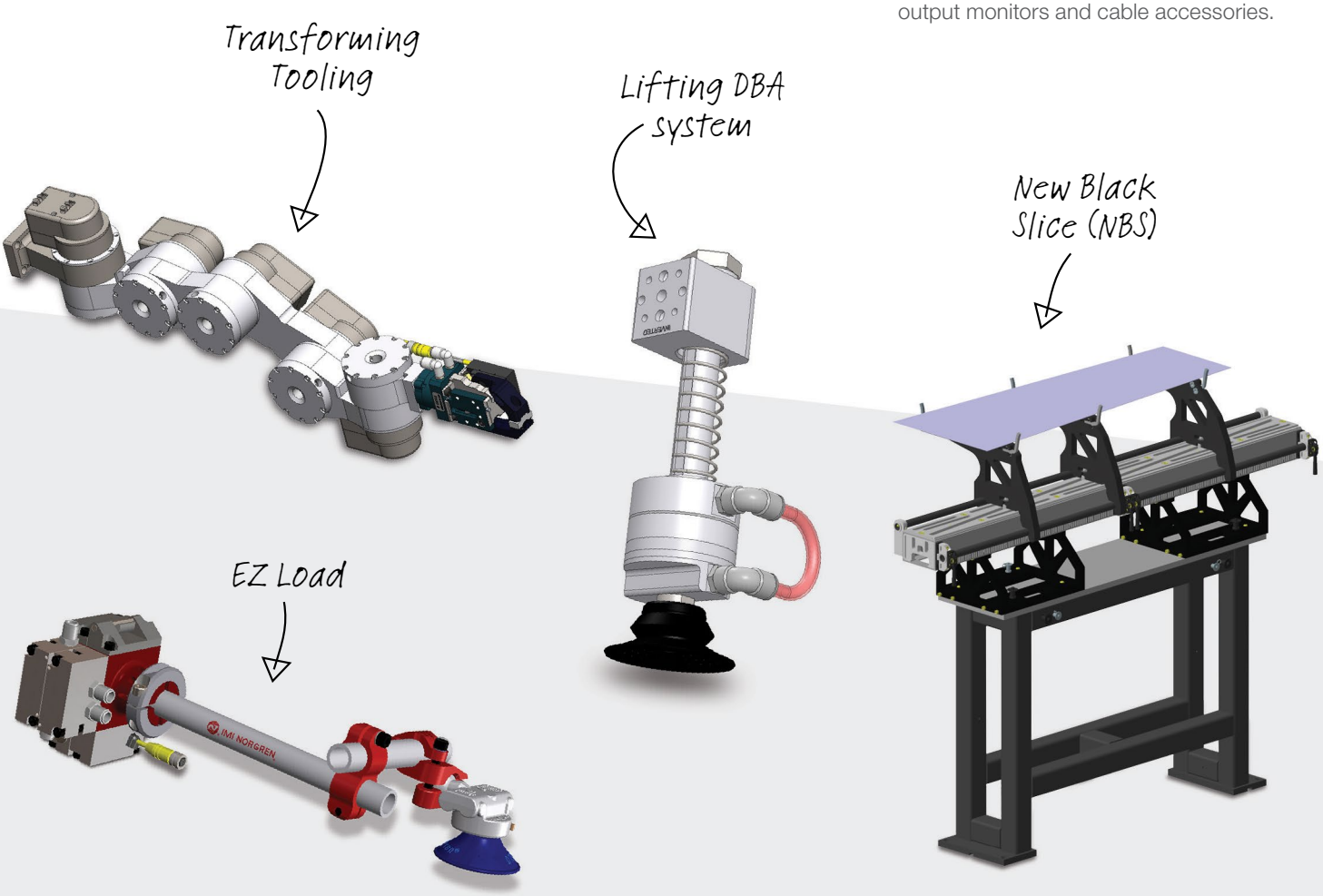
A lightweight yet strong compact manual tool changer designed for Tri-Axis, Tandem and Crossbar presses, as well as for Robotic applications. This innovative docking device has many advantages over dedicated tooling; one worker can operate the tooling with one hand and it takes minutes to set up.

Lifting DBA system

This system is capable of determining the number of panels by weighing blanks in motion. In addition, it is not constrained by the blank material properties and removes downtime issues of contact DBA sensors.

New Black Slice (NBS)

This is an engineered solution for supporting panels in press idle stations. The ergonomically friendly removable system incorporates the concept of 'poka-yoke' using template location codes to prevent placement mistakes. Moreover, to help minimise storage space when not in use, templates join together. This allows the sensor to be used very close to welding operations to detect incorrectly built parts early in the assembly process. We offer a complete line of sensor spring mounts, output monitors and cable accessories.



Integrated Tooling Design and Simulation Capabilities

Efficient and productive press operation begins with the seamless integration of part motion, die structure and finger tooling.

To produce world-class panels and optimise productivity, the stamper, die source and tooling designer must work together from the earliest stages of part development. We offer a multi-step process that coordinates process, die and finger designs to produce tooling that consistently runs at the specified rate, shortly after installation and start-up.

Press Simulation and Modeling

> Press simulation replicates the motion of transfer tooling through a press line using CAD animation.

> This software allows designers to detect any clearance issues or flow interference to avoid crashes and ensure the tooling performs to design specifications.

> We can also physically measure or scan presses to create a press model and detect tooling interferences.

Finger integration package

> Finger integration package identifies interference areas and part flow issues at the start of die design.

> Provided with process flow, panel position, rail position and press / transfer specifications.

> We then add tooling and motion curves to create a design envelope for the die source.

> Also verifies that the selected motion curves fall within press parameters and stamper specifications.

> The stamper signs off on the finished package before allowing die design to proceed.

Online Configurator

GET A GRIP!
5 easy steps to get your PGS10 part number

STEP 1

Visit our website, www.norgren.com/automationsolutions/PGS

STEP 2

Select PGS size based on size and grip force requirements: PGS 10, 11, 20 or 42

STEP 3

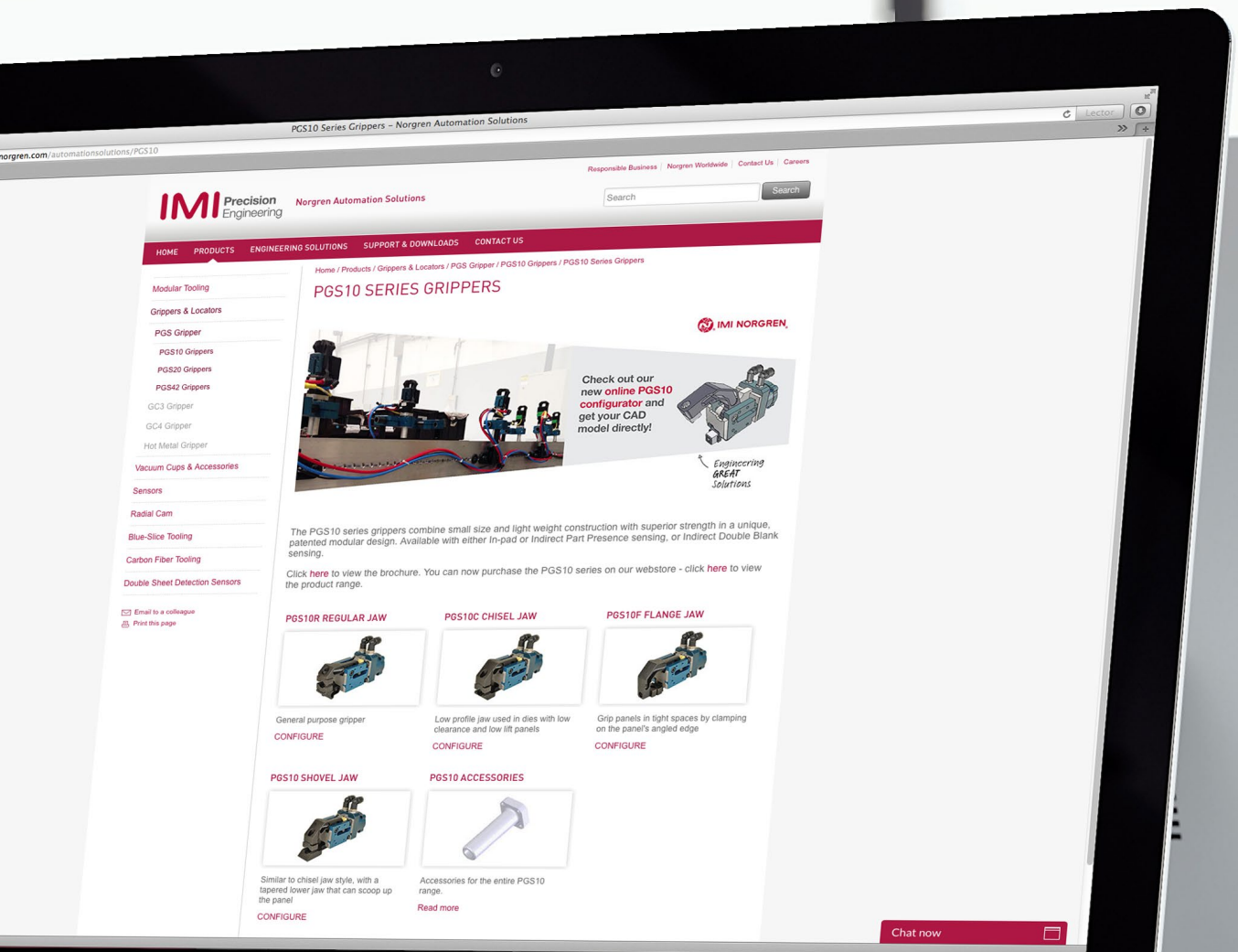
Use the drop down menu to select the specifications you need for your gripper CAD, such as jaw angles, pad type, sensor type or port orientation.

STEP 4

Enter your email address and click the box to “Accept license agreement”.

STEP 5

Click **CAD download** button to generate your part number and CAD drawing in your preferred file format.


PGS10 Series Grippers – Norgren Automation Solutions
norgren.com/automationsolutions/PGS10
IMI Precision Engineering
Norgren Automation Solutions
Responsible Business | Norgren Worldwide | Contact Us | Careers
Search
HOME
PRODUCTS
ENGINEERING SOLUTIONS
SUPPORT & DOWNLOADS
CONTACT US
Modular Tooling
Grippers & Locators
PGS Gripper
PGS10 Grippers
PGS20 Grippers
PGS42 Grippers
GC3 Gripper
GC4 Gripper
Hot Metal Gripper
Vacuum Cups & Accessories
Sensors
Radial Cam
Blue-Slice Tooling
Carbon Fiber Tooling
Double Sheet Detection Sensors
Email to a colleague
Print this page
Home / Products / Grippers & Locators / PGS Gripper / PGS10 Grippers / PGS10 Series Grippers
PGS10 SERIES GRIPPERS
IMI NORGREN
Check out our new online PGS10 configurator and get your CAD model directly!
Engineering GREAT Solutions
The PGS10 series grippers combine small size and light weight construction with superior strength in a unique, patented modular design. Available with either In-pad or Indirect Part Presence sensing, or Indirect Double Blank sensing.
Click here to view the brochure. You can now purchase the PGS10 series on our webstore - click here to view the product range.
PGS10R REGULAR JAW
General purpose gripper
CONFIGURE
PGS10C CHISEL JAW
Low profile jaw used in dies with low clearance and low lift panels
CONFIGURE
PGS10F FLANGE JAW
Grip panels in tight spaces by clamping on the panel's angled edge
CONFIGURE
PGS10 SHOVEL JAW
Similar to chisel jaw style, with a tapered lower jaw that can scoop up the panel
CONFIGURE
PGS10 ACCESSORIES
Accessories for the entire PGS10 range.
Read more
Chat now

IMI Precision Engineering operates four global centres of technical excellence and a sales and service network in 75 countries, as well as manufacturing capability in the USA, Germany, China, UK, Switzerland, Czech Republic, Mexico and Brazil.

For information on all IMI Precision Engineering companies visit **www.imi-precision.com**

Supported by distributors worldwide.

IMI

Precision Engineering

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

z8325BR en/01/17

Engineering GREAT Solutions

IMI NORGREN

IMI BUSCHJOST

IMI FAS

IMI HERION

IMI MAXSEAL

For further information, scan this QR code or visit **www.imi-precision.com**