



magswitch®

Changing The Way Automation Is Done.

AUTOMATION

magswitch.com | +1 (303) 468.0662



Magswitch, headquartered in Colorado, USA is a leader in switchable magnetic technology. From development, design and engineering to manufacturing, final delivery and distribution, Magswitch has paved the way for innovation in multiple automation industries across the globe.

Magswitch has evolved from manufacturing magnetic tools to engineering innovative solutions to increase safety, productivity and efficiency in industries such as automotive, manufacturing, heavy industry and consumer goods.

With numerous patents and patents pending in all of the industrialized markets across the globe, Magswitch has evolved into an global integrated business.



At Magswitch, safety is a top priority. All of our products are designed to be fail-safe; gripped parts will not release during power failure.

Additionally, tools are engineered and developed with critical safety factor calculations, feature simple actuation, and have the capability for stronger hold on thinner materials.

Changing The Way Automation Is Done.

50+ AUTOMATION APPLICATIONS

60+ YEARS OF PROFESSIONAL EXPERTISE

65+ PATENTS/ PATENTS PENDING

250+ UNIQUE SOLUTIONS

Offering unique capabilities and significant improvements to end of arm tooling, pick and place, body-in-white and many other applications, the powerful and lightweight tools in our automation line make it possible to implement magnets where they weren't previously applied. Magswitch can replace vacuum cups and traditional pin clamps which impact operating costs through high energy consumption and downtime.

Magswitch is rapidly being deployed as a platform technology by major global OEMs and Tier One Suppliers in Europe, Asia and North America. If you handle or fabricate steel using automation, you may find solutions with Magswitch that you never knew were possible.

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Every Magswitch product is proudly developed, manufactured and tested to ISO 9001:2015 standards.



Look for our high heat tools. Magswitch tools are capable of handling up to 742° Fahrenheit (350° Celsius).



Safety is our primary design consideration. Fail-safe, durable products limit downtime and reduce injuries during maintenance.



Magswitch products are a green technology utilizing the enduring power of rare earth magnets with low energy consumption.



Technology That Attracts™

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Application Examples

- 4 Assembly/Body In White
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- 11 Pick & Place/Machine Tending
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Mission

"To lead globally in automated magnetic solutions by applying disruptive technology across industries while providing high quality design, engineering, customer service and support."



Michigan based Trantek Automation turns to Magswitch for help in finding a simpler way to error proof an automotive seat frame process.

"I installed these tools in half of the time as traditional clamps due to the NAAMS mounting scheme, and single sided holding." says Mark Reich, Trantek's lead mechanical builder.

"This is a revolutionary way to solve the age old problem of how to poka-yoke the previous operation." says Fred Leisham, Trantek's vice president. "Magswitch's support sets it apart. Not many product companies offer real-world solutions to real-world problems anymore. The experience of Magswitch is truly appreciated."

Custom Application?

Magswitch can assist you in finding a perfect solution for your Automation application.

Contact our Application Engineering Team at
applications@magswitch.com
 or call us at +1 (303) 468.0662
 or visit us at www.magswitch.com/automationsolutions

Assembly/Body In White

Improve throughput by applying Magswitch Automation tools in your Assembly and Body-In-White processes. Magswitch grippers offer the versatility and simplicity of suction cups, while maintaining the reliability and safety of traditional power clamps. Repeatable mounting allows for precision locating of components and fast mean time to repair (MTTR).

For an advanced solution, apply smart technology to enable on-tool part present and double blank detection. New electrical actuation completely removes air from automation cells resulting in even more energy savings. The E Series (Pg 15) also enables de-stack capabilities with Variable Field Output (VFO).

Features & Benefits

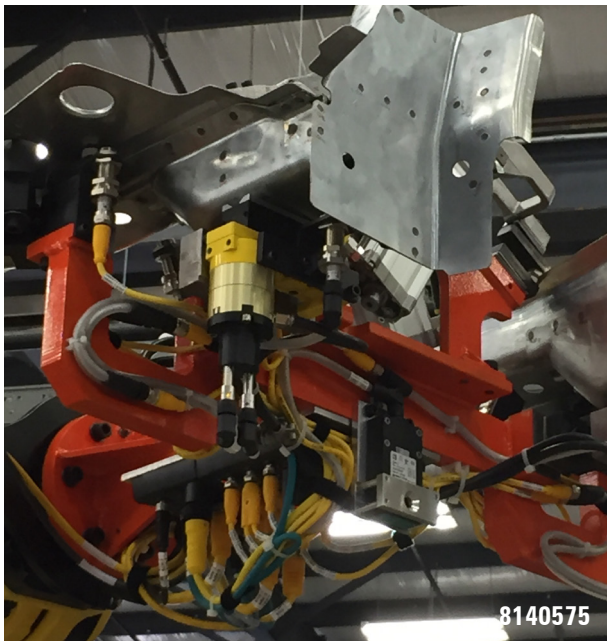
- Compact single sided workholding equates to smaller EOATs
- No need to clamp the outside edge of a part
- Faster grip and release cycles than power clamps and suction cups
- New smart tools allow for inspection of components without external sensors
- Reduce your plant footprint and overall expenses by applying these tools



Other Automotive applications include Powertrain, Paint Shop & more! Ask our Applications Engineering team for more info at applications@magswitch.com



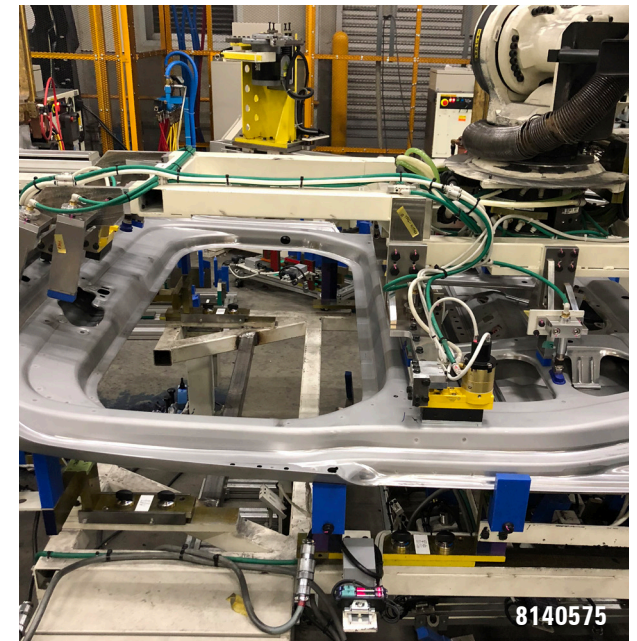
Class A Door Opening



Body-In-White Part Handling



Body-In-White De-Stacking



Door Hemming



81401007

Direct Robot Mount Solutions

Bin Picking

Couple Magswitch grippers with vision for a robust bin picking solution for handling randomly arranged components. Pole shoes allow for gripping components on flat or round surfaces. Deep magnetic fields can overcome small misalignments between gripper and target.

Magswitch recommends the use of armor plating (Pg 26) to reduce wear from impacts due to chaotic conditions and to improve product lifetime.

Features & Benefits

- Run faster knowing you have secure connection with smart technology
- Fit in tighter spots with compact grippers
- Access more parts due to single sided workholding
- Handle multiple part models with more versatile gripping surfaces

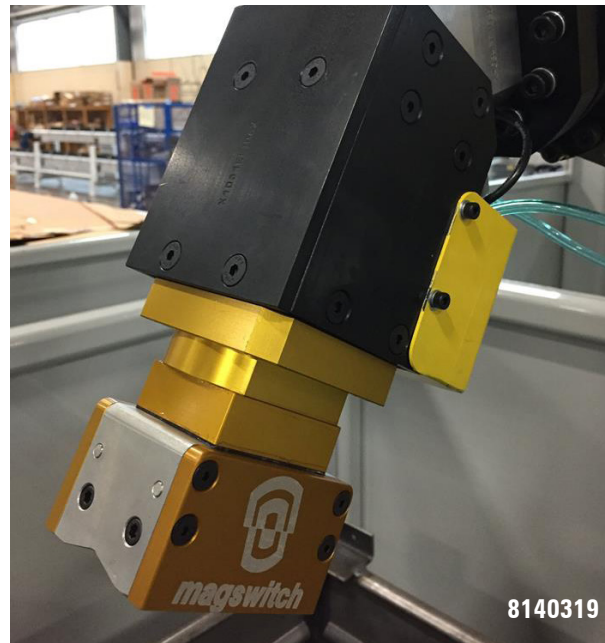


Looking for an even more advanced solution? Check out the J-Series tools (Pg 16). Smart technology enables part presence and calibrated position confirmation!



81401007

Smart Billet Bin Pick



8140319

Custom Armor



81401115

Camshaft Smart Bin Pick

Pressure Vessel Fabrication

Magswitch works with you to ensure every design is tailored to meet your needs. Efficiency gains are multiplied when utilizing Magswitch throughout your facility. Use the deep field of our LAY series to cut through scale or handle coated parts. Customize pole shoes to match hard to grip component geometry.

Whatever size of job, Magswitch has you covered with the right solution. Consider the power of Magswitch on your next industrial automation project!



Looking for a custom solution? Check out our custom tools and accessories for industrial applications (Pg 23-24).

Features & Benefits

- Deep field for handling thick steel with non-ideal surface conditions
- Linear Arrays multiply performance in a condensed package and handle long parts more securely than a single unit alone
- High strength to weight ratio for gripping large parts with fewer magnets



Tube Handling with Vertical Compliance



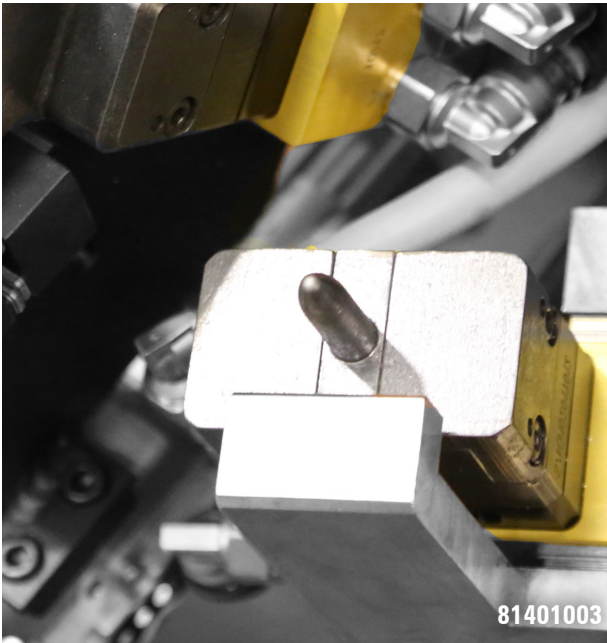
Pressure Tank Lid Rotation



U Pipe Gripper



Custom Locating Pole Shoes for U Pipe



Pin Locating

Fixture Tooling

Repeatability is key in laser cutting operations as well as clamping fixtures. Utilize our NAAMS mounting options to ensure a reliable and repeatable fixture. Custom pole shoes allow for geometry matching or custom pin attachments for precision locating.

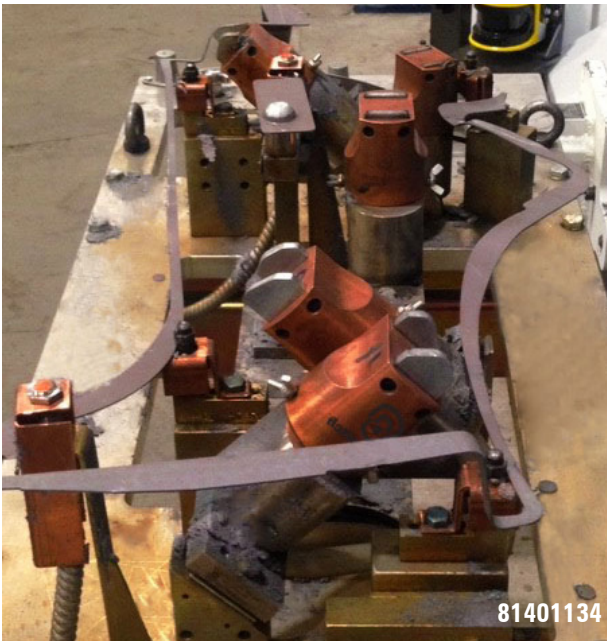
Contact our engineers for assistance integrating Magswitch products into your fixtures.

Features & Benefits

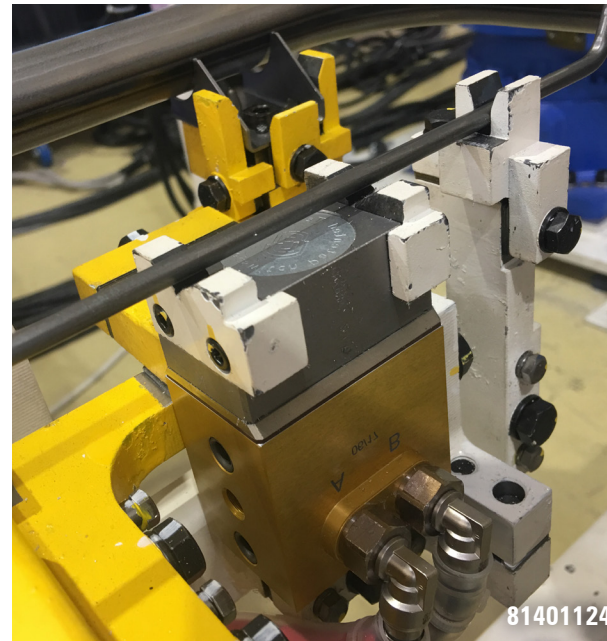
- Position tools away from edge of part to improve access for welding and laser cutting
- No moving parts (clamp arms)
- Improved ergonomics & safety
- Eliminate need for fixture exchange with common tooling
- Reduced chatter for cleaner cuts



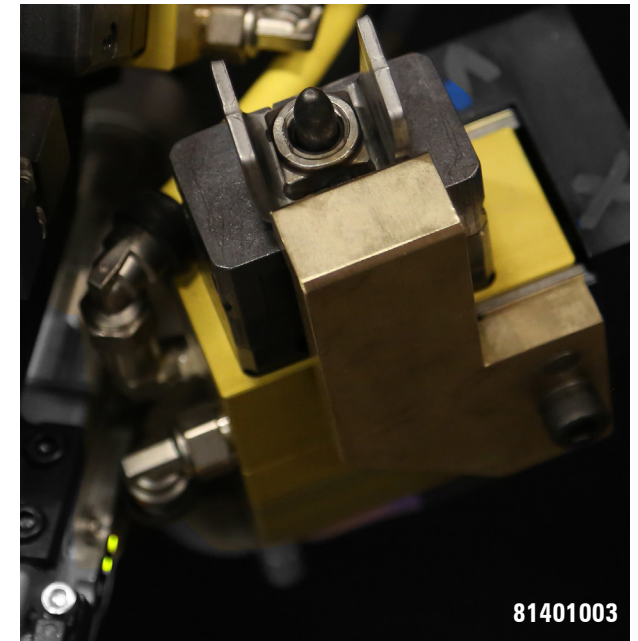
For more robust feedback in your application, check out the J-Series tools (Pg 16). Smart technology enables part presence and calibrated position confirmation.



Laser Fixture



Seat Frame Weld Fixture



Nut Weld Inspection

Ergonomic Lift Assist

Improve your operator lifting capabilities with our Ergonomic Lift Assist Solutions. Safety is critical in any process and especially true when operators must handle heavy components.

Zero gravity lift assists combined with Magswitch tools allow a single operator to handle large loads without breaking a sweat and perform repetitive operations. This reduces the chance of workplace injuries and improves overall efficiency.

Features & Benefits

- Fail-safe operation maintains a strong grip with or without the operator present
- Improved ergonomics reduces strain on operators preventing accidents and injuries
- High power in a compact tool maximizes lift assist load capacity
- Custom Pole Shoes enable versatility when handling multiple model geometries



Consider applying the AR series (Pg 21) or PLAY series (Pg 19) on your next ergonomic lift assist device!



Bead Blasting Load Operation



Press Brake Loading



Center Floor Transfer



Axle Shaft Dunnage Load



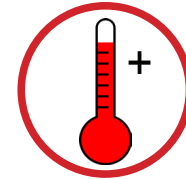
A-Pillar Press Unload

Hot Stamping

Steels used in production are getting lighter and more durable requiring the use of new technologies to manufacture components. One such technology is the high temperature press. Handling parts after the forming operation takes a toll on traditional grippers. Magswitch tools can take the heat and abuse of the most grueling operation. Our tools have replaced traditional grippers that require replacement every shift. The Magswitch solution significantly reduced downtime and 4 years later are still running today!



Check out our PLAY Series (Pg 19) and AR Series (Pg 21) for details on our high heat products.



Features & Benefits

- Handling of hot (300°C) stamped parts out of the press
- Replacing suction cups and mechanical clamps
- No part ejectors required in dies
- Still no failures after 4 Million + cycles!



Blank Fanning

Sheet Separation

Our switchable magnetic sheet fanners provide a faster and safer alternative to separate ferromagnetic sheets. The magnetic field is transferred to the steel blanks which take on the magnetic polarity causing sheets to repel from each other.

Apply the Magswitch sheet fanner to the side of any stack of blanks or thin steel components and watch the top layers separate for easy de-stacking. These tools reduce workplace injuries inherent with operation of traditional always-on sheet fanners.



See Manual Sheet Fanner (Pg 22) for more details.

Features & Benefits

- Manual ON/OFF allows for safer operation and maintenance
- Self indexes to top sheet as sheets are removed
- Light enough to carry between stacks
- Saves fingers
- Separate sheets to reduce potential for double blank conditions

I Beam Handling

Magswitch supplies a compact, lightweight solution for robotic handling of relatively thin industrial I Beams. Different EOAT designs are utilized for handling single beams as well as multiple beams from vertical hanging position to a horizontal conveyor.

Common tools throughout production line allows for reduction in spare part inventory and overall expenses. Consider the power of Magswitch on your next industrial project!

Features & Benefits

- Magnet turns completely off and doesn't collect debris
- Replaces larger magnets with a smaller and more compact design
- No need to clamp the outside edge of a part
- Faster grip and release cycles than power clamps and suction cups
- Reduce your plant footprint and expenses by applying Magswitch tools



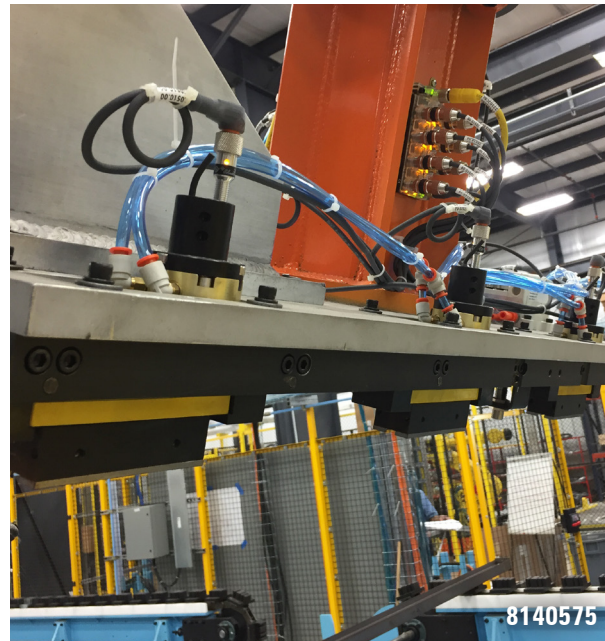
Check out our Linear Arrays (Pg 19) for more information on the versatile PLAY Series!



Multi Beam EOAT



Single Beam EOAT



Customized Pole Shoes



Custom Pole Shoes



Machine Tending

Pick & Place/Machine Tending

Multi-head designs keep machines running and help reduce cycle time. Pick and place and machine tending operations can be performed significantly faster when replacing mechanical grippers, power clamps or suction cups.

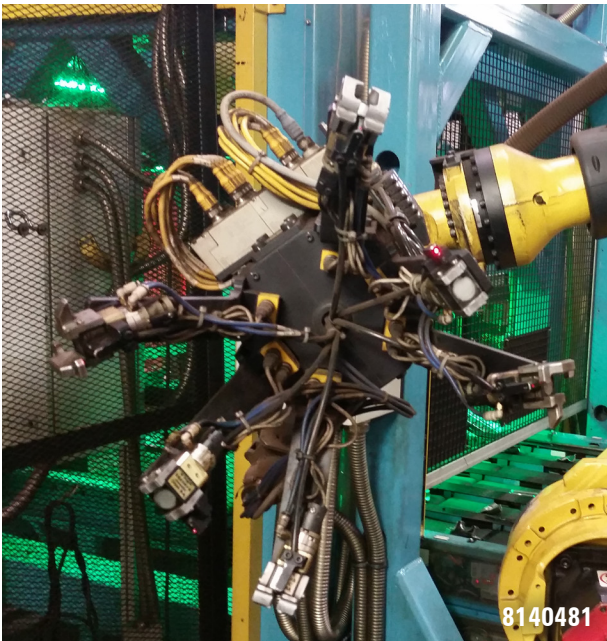
Custom pole shoe accessories provide tailored locating features to improve holding force and securely grip components of all geometries.

Features & Benefits

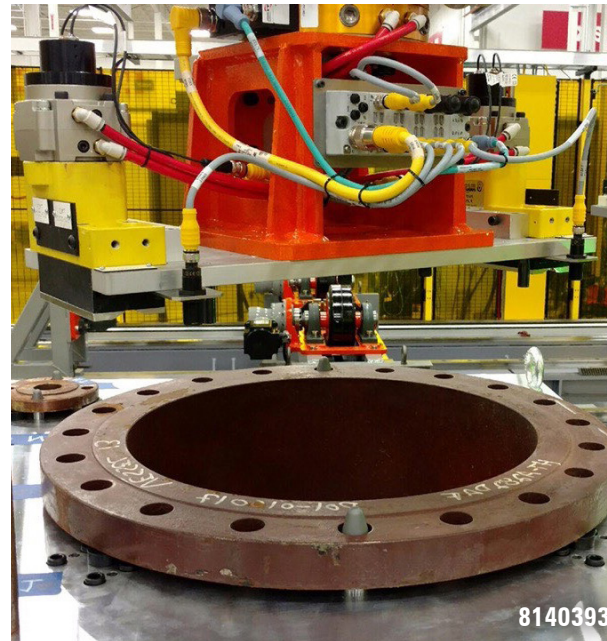
- Single sided part clamping
- Highly flexible tooling can be applied on any application
- Reduced design, engineering and manufacturing time
- Easy integration by eliminating complexity
- Minimizes EOAT size
- Increased overall throughput



Check out our standard (Pg 23) and custom (Pg 24) accessory options and tools for more information!



Multi Component Pick & Place



Mill Loading



Bore Milling

Press Line/Stamping

Stamping processes can be performed faster and more efficiently using Magswitch products. Magswitch products can handle lubricated sheet metal blanks more effectively than suction cups by gripping through the oil. This reduces downtime from slipping or dropped parts. Improved cycle times are achieved with fast actuation times of 0.3 seconds. Air consumption is reduced by 90% and even more when compared with vacuum!

Features & Benefits

- Replacing suction cups and mechanical clamps
- No part ejectors required in dies
- Fail-Safe
- Reduced downtime
- Faster actuation
- Reduced air consumption
- Better shear performance



Check out our AY Series (Pg 22), Smart Tool Technology (Pg 16) and High Temperature tools for Press Line Solutions.



Progressive Die Throughput Enhancement

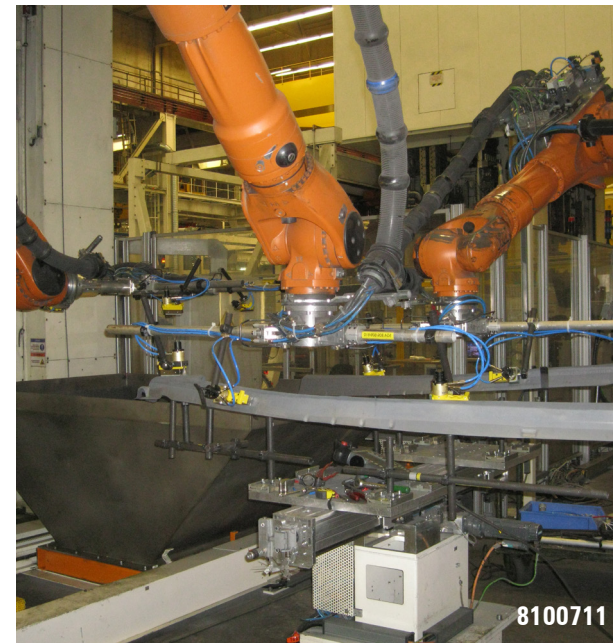
Partner: Anchor Mag (anchor-mag.com)



Improvement Of Sheet Handling Dies



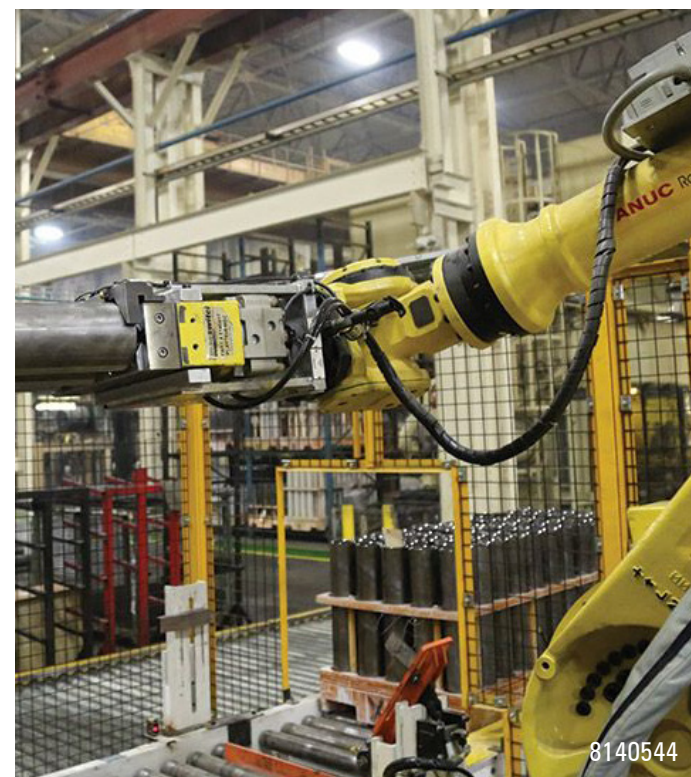
Blank Transfer



A-Pillar Press Unload

Automation Products

- 14 NEW: D85 Series
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"With a magnetic gripper I had to know exactly where the part lined up with the magnet to ensure it hadn't shifted or slipped. With the Magswitch I know that where the axle tube is gripped initially is where it will stay."

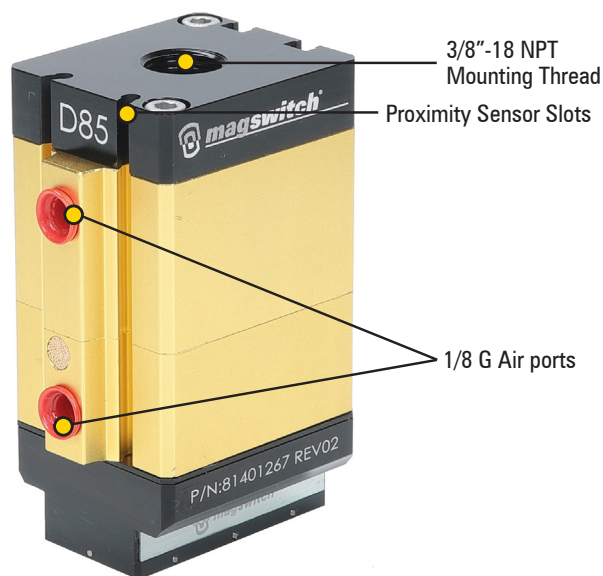
The major change, according to Calderone, is Dana's ability to run operations faster as a result of Magswitch's commanding hold and easy transition from part to part. "Using the Magswitch has made a big difference in how we handle our parts," he adds.

"When using the electromagnet, it was difficult to pull the steel straight off the magnet, but very easy to slide if off, which presented safety issues. The Magswitch doesn't allow parts to slide and I'm not worried about shearing a part off." That reassurance means the robots on Dana's line can run faster without worrying about parts dropping off mid-cycle.

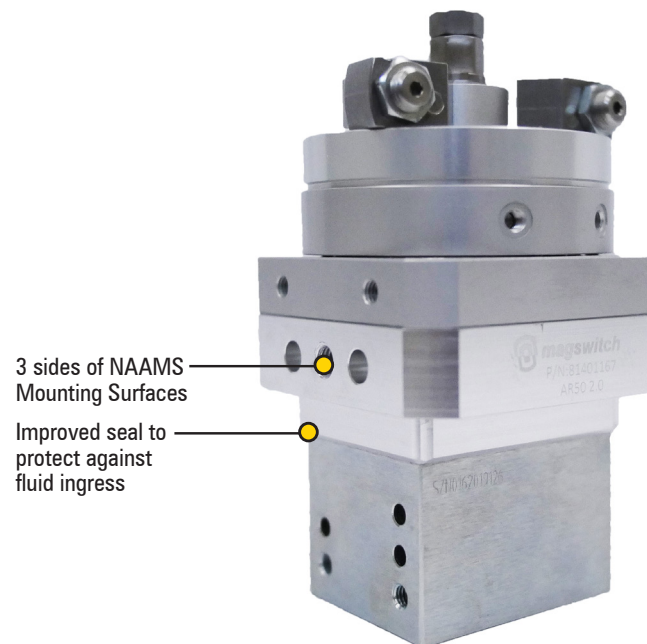
Need help selecting the right magnet for the job?

Contact our Application Engineering Team at
applications@magswitch.com
or call us at +1 (303) 468.0662
or visit us at www.magswitch.com/automationsolutions

D Series- New To Magswitch!



AR50 2.0 - New & Improved!



D Series is joining the Magswitch Family!

The new D85 is a narrow-footprint tool intended for use picking sheet metal. Featuring multiple shallow field array technology, it is a mighty pneumatic tool which excels at de-stacking and lifting thin materials when most larger magnets can't get a grip.

Features & Benefits

- Ideal for sheet metal pick and place
- Small footprint for locating on complicated geometries
- Low Air Pressure Requirement
- Fail-Safe
- Applications in pick & place, thin part handling and de-stacking

Accessories

- Class-A-Boot
- Tool On/Off Sensors
- Mounting Accessories

	D85
Part #	81401467
Max Breakaway*	39 lbs (18 kg)
Height	3.9 in (99 mm)
Width	1.8 in (46 mm)
Length	2.4 in (60.5 mm)
Weight	1.46 lbs (0.66 kg)

* This does not apply to all conditions.
See spec sheets for more performance data.

The Improved AR50 tool!

Magswitch AR50 2.0 is compact and powerful boasting cutting edge technology enhancements and precision mounting interfaces. These tools are great for fixtures, pin locating and thin part material handling. Additional custom pole shoe geometry allows for extreme flexibility in applications. This tool is a precision fit for your next project!

Features & Benefits

- Compact single magnet design
- In case of power loss and maintenance inspections, the external manual override is included which saves the day
- Larger air ports (G1/8) for increased compatibility and robust connections
- Manufactured to precision tolerances with symmetrical NAAMS mounting
- Customizable contact surface
- Maximum power to weight ratio
- Saves energy – 90% less air
- Fail-safe operation

	AR50 2.0
Part #	81401167
Max Breakaway*	489 lbs (222 kg)
Height	6.06 in (152.1 mm)
Width	3.28 in (83.3 mm)
Length	3.28 in (83.3 mm)
Weight	4.9 lbs (2.2 kg)

* This does not apply to all conditions.
See spec sheets for more performance data.

E SERIES - Electrically Actuated Tools!

Combining Magswitch's patented core technology with revolutionary smart tool capabilities and an electric actuation, the E Series allows Magswitch to offer even more advantages than ever before!

Features & Benefits

- Slim profile optimized for EOAT applications
- 24VDC operation below 1A (E30)
- Serial communication: CANopen Bus
- Combine power and communication in one cable
- Fail-Safe Smart tool
- Variable Field Output (VFO)
- De-stack thin parts
- Enhanced bin pick capabilities
- Store Multiple Calibrations

Accessories

8800782 E30 Standard Pole Shoes Kit

8800837 E50 Standard Pole Shoes Kit

8800826 MagMaster: Communication Module for E Series



Standard M12 5 Pin A-coded connector
See Smart Capabilities on Pg 17



Dowel and Fastener Top
Mounting Interface

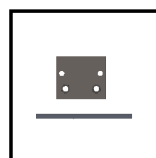
Lightweight and Robust: High
Grade 7075 Aluminum Enclosure

Accepts Standard and
Custom Pole Shoes.
(Not pictured here)

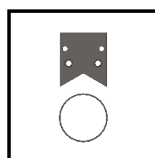


Variable Field Output™

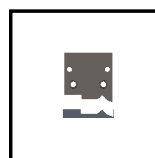
The all new Variable Field Output (VFO) allows the tool to de-stack thin material and optimize performance for your component. Once the part is gripped and separated from adjacent parts, the tool can be switched to full power for maximum performance.



FLAT



ROUND

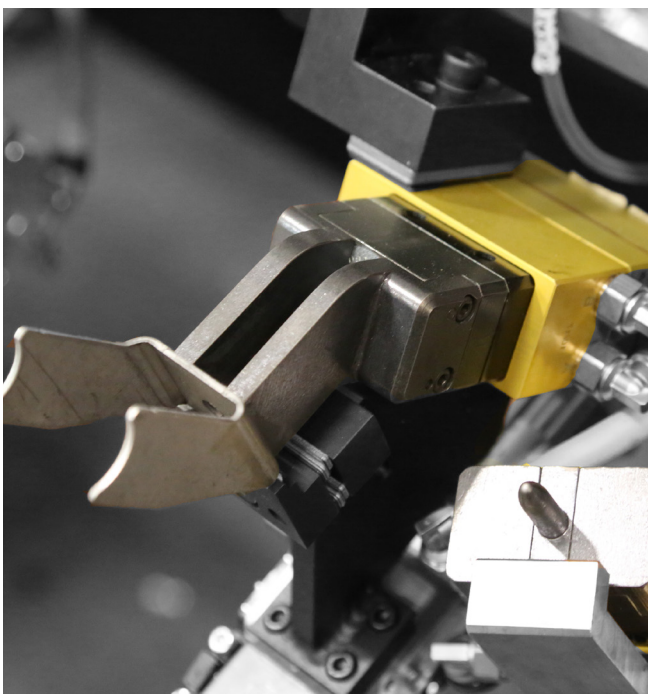
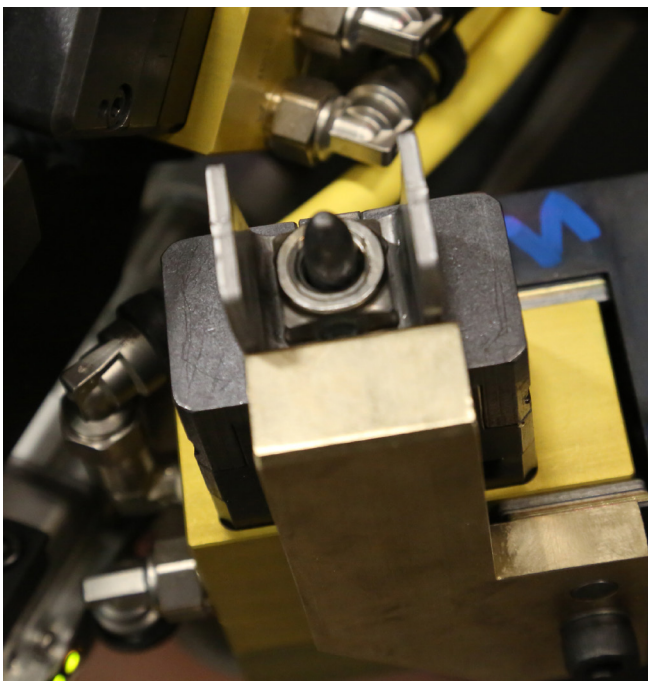


IRREGULAR

Pole Shoes are required.
Not Included with base tool.

	E30	E50
Part #	81401213	81401227
Max Breakaway*	134 lbs (61 kg)	507 lbs (230 kg)
Height	5.7 in (146 mm)	8.6 in (220 mm)
Width	1.3 in (35 mm)	2.2 in (58 mm)
Length	2.4 in (62 mm)	4.3 in (111 mm)
Weight	1.7 lbs (0.8 kg)	7.27 lbs (3.3 kg)

* This does not apply to all conditions. See spec sheets for more performance data.

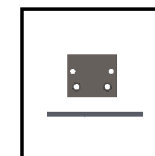


J SERIES - Smart Tools

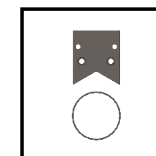
Magswitch J Series features integrated smart technology with enhanced real time feedback via sensor integration. Handle double blank detection at an affordable cost and without clunky external sensors. Calibrate tool to confirm correct part present or identify dangling components via pole contact detection.

Features & Benefits

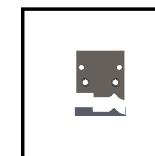
- Eliminates the need for additional sensors
- Real time feedback related to pole contact
- Field calibration enables user to configure tools for specific applications
- Ability to store multiple calibrations
- Improved pole shoe mounting
- Repeatable NAAMS mounting
- Great for bin picking applications and any process requiring correct part verification



FLAT



ROUND



IRREGULAR

Accessories

8800767 J30 Standard Pole Shoe Kit

8800762 J50 Standard Pole Shoe Kit

8800794 M12 - 12 pin to dual 5 pin cable adapter

8800795 M12 - 12 pin right angle female to pigtail 2m

8800796 M12 - 12 pin right angle female to pigtail 5m

8800752 M12 - 12 pin Right angle female to straight male 5m

8800815 Control/Teach Box



Pole Shoes are required.
Not Included with base tool.

	J30	J50	J 50 NAAMS
Part #	81401003	81401007	81401115
Max Breakaway*	124 lbs (56 kg)	507 lbs (230 kg)	507 lbs (230 kg)
Height	5.6 in (141.8 mm)	7.7 in (196.3 mm)	7.7 in (196.2 mm)
Width	1.4 in (35 mm)	2.2 in (56.2 mm)	4.4 in (112 mm)
Length	3 in (77.6 mm)	3.9 in (98 mm)	3.8 in (97 mm)
Weight	1.6 lbs (0.7 kg)	6.4 lbs (2.9 kg)	7 lbs (3.2 kg)

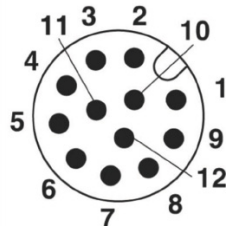
* This does not apply to all conditions. See spec sheets for more performance data.

Smart Tool Technology

Newly developed IP enables I/O feedback without added sensors using a single cable discrete connection. Capabilities include calibrated part presence, ON and OFF signal, individual pole contact and double blank detection. Additionally smart tools are capable of integrating Degauss functionality as described below.

Recommended for use in press applications to identify double blank condition and prevent costly downtime. Use as a sensor for calibrated part detection in welding applications such as verifying part installation from previous process. You can move at full speed with confidence knowing you have full grip!

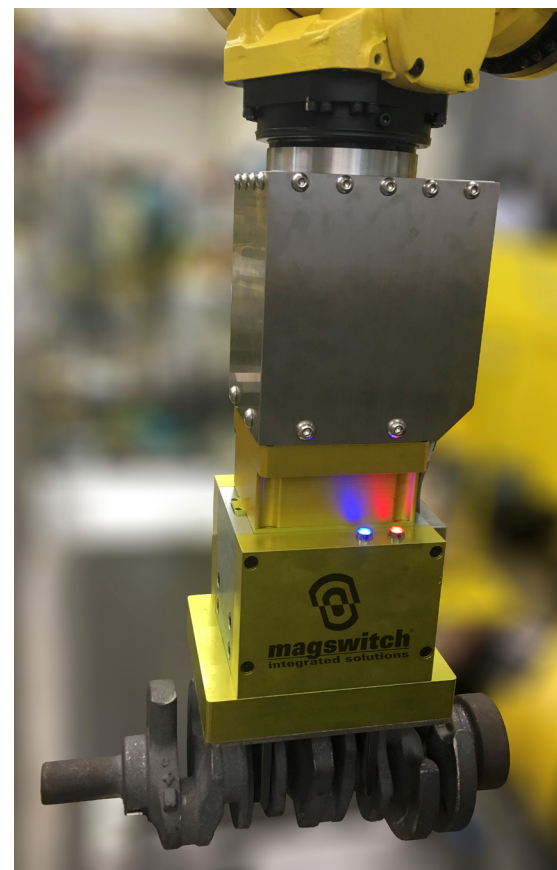
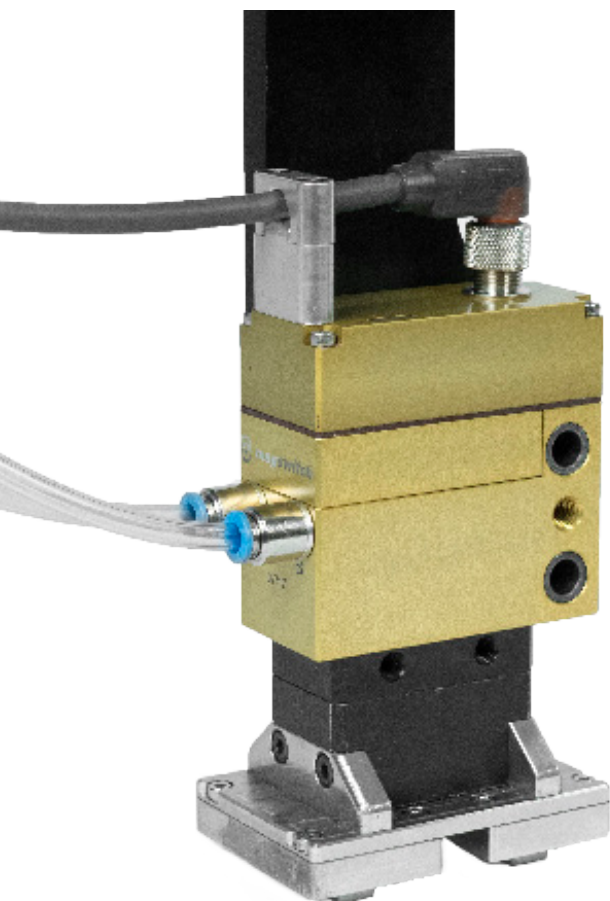
M 12 - 12 pin connection on tool

**Degauss Solutions**

Degauss is available as an option when ordering the J Series (Pg 16). New technology allows for magnetic handling of hardened parts in sensitive applications like vehicle powertrain components. Target residual level below 20 gauss is achievable for most applications. The tool is pneumatically actuated and electrically degaussed via 24VDC. Expand your toolbox and see what can be done today!

Features & Benefits

- Removes magnetic footprint left by tool
- Integrated with Smart Technology
- Ideal for powertrain, high strength and hardened steel components
- Degaussing tools eliminate post-handling residual
- No surface pollution
- No assembly issues
- Useful for gears and camshafts, bearings, turbine assemblies etc.



Available on J Series & Custom Solutions. If you need an engineered solution, please contact Magswitch!



T SERIES

Magswitch T-Series is compact and powerful boasting cutting edge technology enhancements and precision mounting interfaces. These tools are great for fixtures, pin locating and thin part material handling. Additional custom pole shoe geometry allows for extreme flexibility in applications. This tool is a precision fit for your next project!

Features & Benefits

- Larger air ports (G1/8) for increased compatibility and robust connections
- Manufactured to precision tolerances with symmetrical NAAMS mounting
- Tool is equipped with externally accessible manual override
- 79x54x36 dimension and Maximum Breakaway of 160lb/73kg*
- In case of power loss and maintenance inspections, the external manual override is included which saves the day

Accessories

8800747 T30 Pin Clamp Pole Shoe Kit

Allows custom pin component to be utilized for alignment of target parts.

8800840 T20 Standard Pole Shoe Kit

Guides magnetic field into target. Standard for flat parts.

8800756 T30 Thin Target Pole Shoe Kit

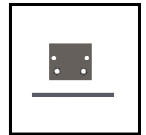
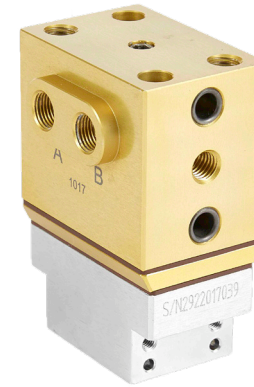
8800878 T20 Thin Optimized Pole Shoe Kit

Improved thin target performance by 50-70% with new patented innovative design.

8800699 T30 Sensor Cap Kit

8800864 T20 Sensor Cap Kit

Allows 2x M8 Proximity sensors to detect ON and OFF state.



FLAT



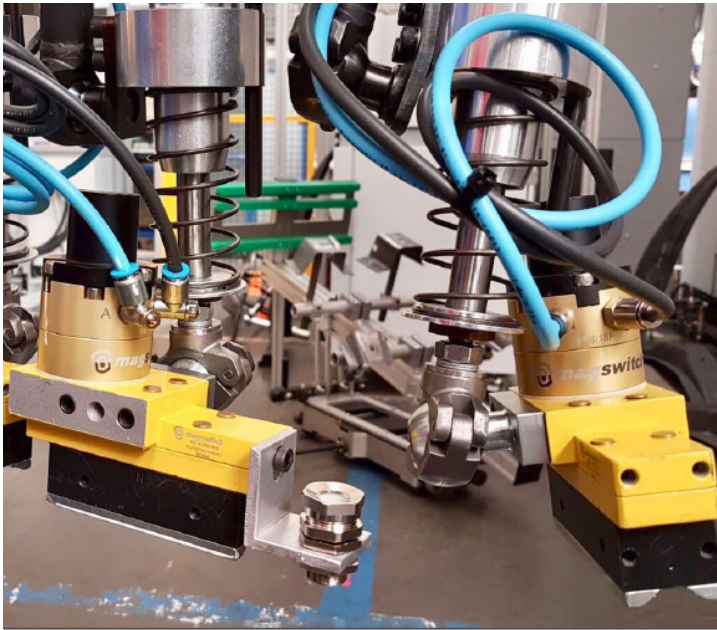
ROUND



IRREGULAR

	T30	T20
Part #	81401124	81401258
Max Breakaway*	161 lbs (73 kg)	75.4 lbs (34 kg)
Height	3.1 in (79 mm)	2.1 in (54 mm)
Width	1.6 in (40.5 mm)	1.3 in (32.5 mm)
Length	2.1 (54 mm)	1.4 in (36 mm)
Weight	1 lb (0.5 kg)	0.42 lbs (0.19)

* This does not apply to all conditions. See spec sheets for more performance data.



PLAY Series

Magswitch PLAY series brings the power of multiple magnets together with a single point of actuation. Use these tools when handling long pipes or beams. Additionally keep these tools in mind for heavy weight applications. These tools have customizable pole elements which can be applied to improve handling in any application.

Features & Benefits

- Customizable Contact Surface
- Deep field technology
- Ideal for handling long components
- Saves energy
- Fail-safe operation

Accessories

8800758 PLAY30x7 Prox Cap Combo shoes Kit

8800748 PLAY30x7 Pole Shoe Kit

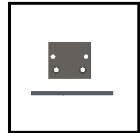
8800832 PLAY20X4 NAAMS Combo Shoes Kit

8800306 PLAY50X2 Combo Shoes Kit

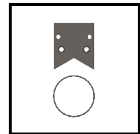
8800307 PLAY50X3 Combo Shoes Kit

8800308 PLAY70X4 Combo Shoes Kit

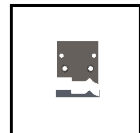
8800309 PLAY70X2 Combo Shoes Kit



FLAT



ROUND



IRREGULAR



	PLAY20x4 NAAMS	PLAY30x7	PLAY50x2	PLAY50x3	PLAY50x4
Part #	81401096	81401193	8140405	8140393	8140404
Max Breakaway*	288 lbs (131 kg)	781 lbs (354 kg)	1100 lbs (499 kg)	1652 lbs (749 kg)	2286 lbs (1037 kg)
Height	5.5 in (140 mm)	6.3 in (159 mm)	9.8 in (248 mm)	10 in (254 mm)	10.4 in (265 mm)
Width	2 in (50 mm)	2.6 in (66 mm)	3.2 in (82 mm)	4 in (98.3 mm)	4 in (98.3 mm)
Length	4.6 in (117.5 mm)	10.2 in (258 mm)	5.7 in (146 mm)	8 in (206 mm)	10.4 in (264 mm)
Weight	2.6 lbs (1.2 kg)	10 lbs (4.6 kg)	10.6 lbs (4.8 kg)	17.4 lbs (8 kg)	22 lbs (10 kg)

* This does not apply to all conditions. See spec sheets for more performance data.



	PLAY70x2	PLAY70x3	PLAY70x 4
Part #	8140391	8140544	8140417
Max Breakaway*	2123 lbs (963 kg)	2874 lbs (1304 kg)	3900 lbs (1769 kg)
Height	11 in (280 mm)	11.9 in (301 mm)	11.8 in (300.5 mm)
Width	3.8 in (96 mm)	5 in (125 mm)	5 in (125 mm)
Length	7.6 in (193.5mm)	11.3 in (286 mm)	14.4 in (366 mm)
Weight	36 lbs (16.3 kg)	49 lbs (22 kg)	53.6 lbs (24.3 kg)

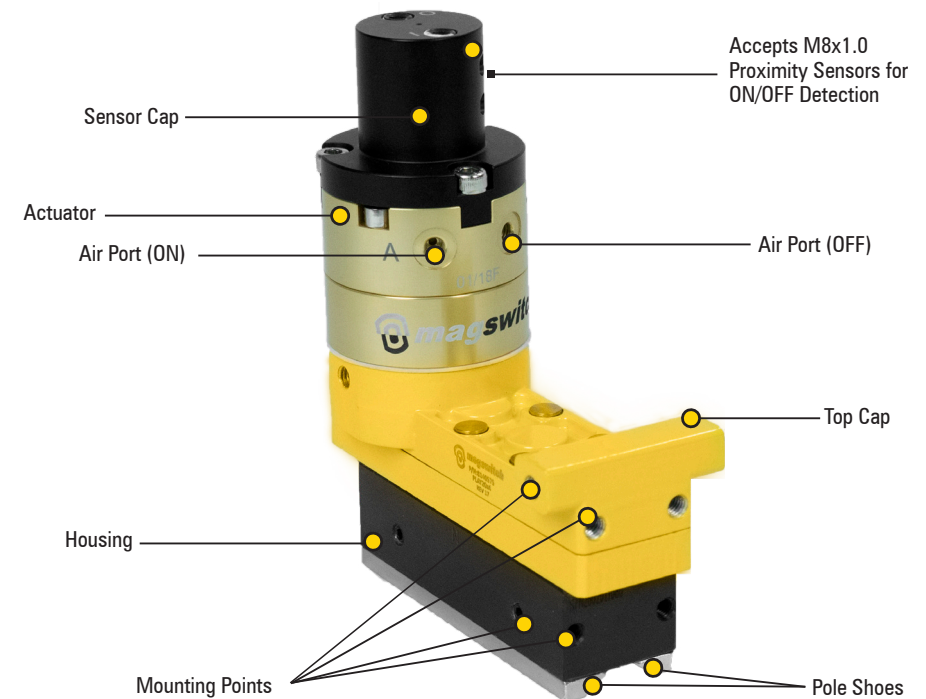


High Heat



Our PLAY Series is available in high temperature versions. They are capable of handling up to 742° Fahrenheit (350° Celsius) and can be used in Hot Stamping applications (Pg 9).

Product Name	Part Number
PLAY20x4 EH	8140711
PLAY20x4 NAAMS EH	8140957
PLAY50x2 EH	8140873
PLAY50x3 EH	8140838
PLAY50x4 EH	8140874
PLAY70x2 EH	8140875
PLAY70x3 EH	8140836
PLAY70x4 EH	8140876



* This does not apply to all conditions. See spec sheets for more performance data.

AR Series

Magswitch AR tools are some of the most versatile grippers in our lineup. Compact and lightweight, these tools pack a high power to weight ratio to handle any size application. With customizable pole shoes, the AR series can handle any geometry you throw at it. No need to find a flat spot in your next project. Simply contact our engineers to help you tap into the extreme flexibility of these tools.

Features & Benefits

- Compact single magnet design
- Classic mounting is the most compact in the range
- Customizable contact surface
- Maximum power to weight ratio
- Saves energy - 90% less air
- Fail-safe operation
- Larger air ports (G1/8) for increased compatibility and robust connections
- Manufactured to precision tolerances with symmetrical NAAMS mounting

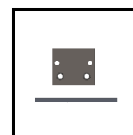


Our AR Series is available in high temperature versions. They are capable of handling up to 742° Fahrenheit (350° Celsius) and can be used in Hot Stamping applications (Pg 9).

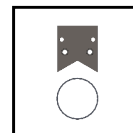
Pole Shoes are required.

Accessories

- 8800760** AR50 2.0 Standard Pole Shoes Kit
- 8800881** AR50 2.0 Combo Shoes AR50 2.0 kit
- 8800363** AR70 Standard Pole Shoes AR70 kit
- 8800072** AR70 Combo Shoes AR70 kit
- 8800364** AR110 Standard Pole Shoes Kit
- 8800073** AR110 Combo Shoes Kit



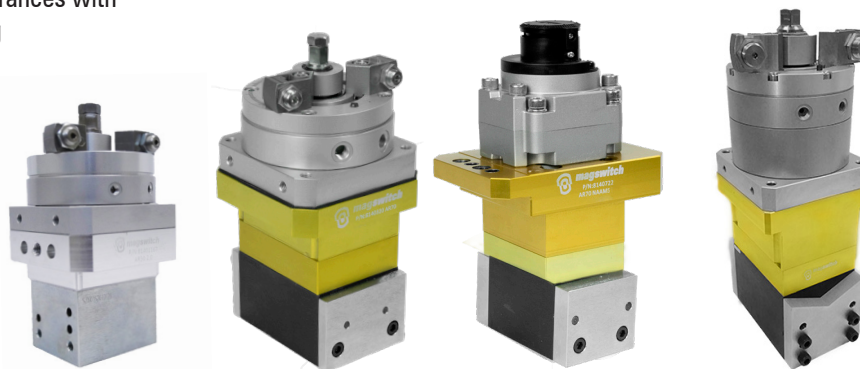
FLAT



ROUND

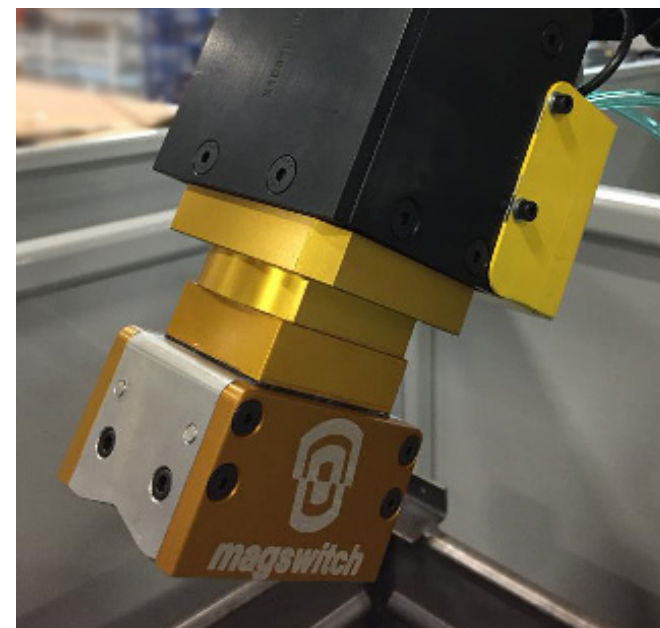


IRREGULAR



	AR50 2.0	AR70 Classic	AR 70 NAAMS	AR110
Part #	81401167	8140320	8140715	8140740
Max Breakaway*	489 lbs (222 kg)	960 lbs (435 kg)	960 lbs (435 kg)	3120 lbs (1415 kg)
Height	6.06 in (152.1 mm)	8.5 in (217 mm)	10.1 in (256 mm)	16.9 in (430 mm)
Width	3.28 in (83.3 mm)	4.3 in (110 mm)	4.3 in (108 mm)	6.6 in (167 mm)
Length	3.28 in (83.3 mm)	4.3 in (110 mm)	6.1 in (154.5 mm)	7.5 in (190 mm)
Weight	4.9 lbs (2.2 kg)	10.6 lbs (4.8 kg)	15 lbs (6.8 kg)	47.6 lbs (21.6 kg)

* This does not apply to all conditions. See spec sheets for more performance data.

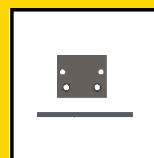
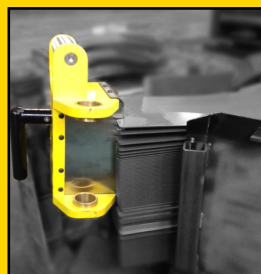


Sheet Fanner

Magnetic sheet fanners provide a faster and safer alternative to separate ferrous sheets. The magnetic field is transferred to the steel blanks which take on the magnetic pole to repel from each other. Apply the Magswitch sheet fanner to the side of any stack of blanks or thin steel components and watch the top layers separate for easy destacking.

Features & Benefits

- Tackles any height stack with ease
- Free floating design holds fanner to stack with auto-indexing functionality
- Use with or without a guide rod
- Powerful magnetic field separates sheets
- Chamfer design allows for uneven stacks
- Easy separation of stacked components
- Portable and lightweight

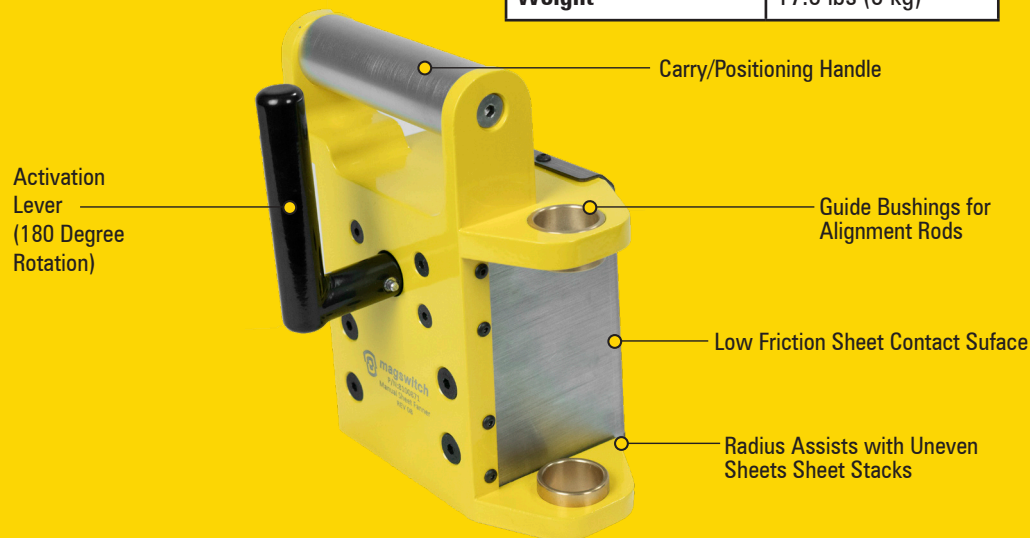


FLAT



IRREGULAR

	Manual Sheet Fanner
Part #	8100871
Height	9 in (228 mm)
Width	6.4 in (162 mm)
Length	7.5 lbs (190 kg)
Weight	17.8 lbs (8 kg)



M10AY ASC

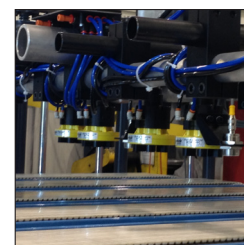
Need to handle thinner parts or lift to shear? The AY series tools utilize patented shallow field technology to enable de-stacking of thin sheets. The advanced field pattern increases shear performance over single unit tools. This tool is only for use on flat areas.

Features & Benefits

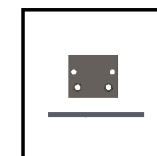
- Better performance in shear
- Replaces suction cups
- Best tool for de-stacking
- Saves energy
- Fail-safe operation
- Shallow field technology



For AY Series, Shallow Field Technology works on thinner materials such as sheet metal, and stamped parts that have flat picking surface large enough for the entire unit!



	M10AY ASC
Part #	8140543
Max Breakaway*	53 lbs (24 kg)
Height	4.1 in (105 mm)
Width	2.6 in (66 mm)
Length	2.6 in (66 mm)
Weight	1 lb (0.5 kg)



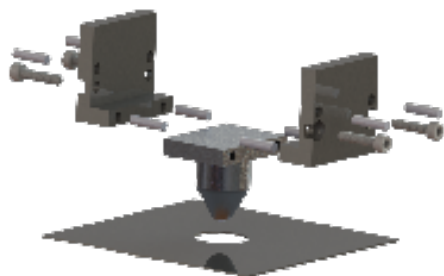
FLAT

* This does not apply to all conditions. See spec sheets for more performance data.

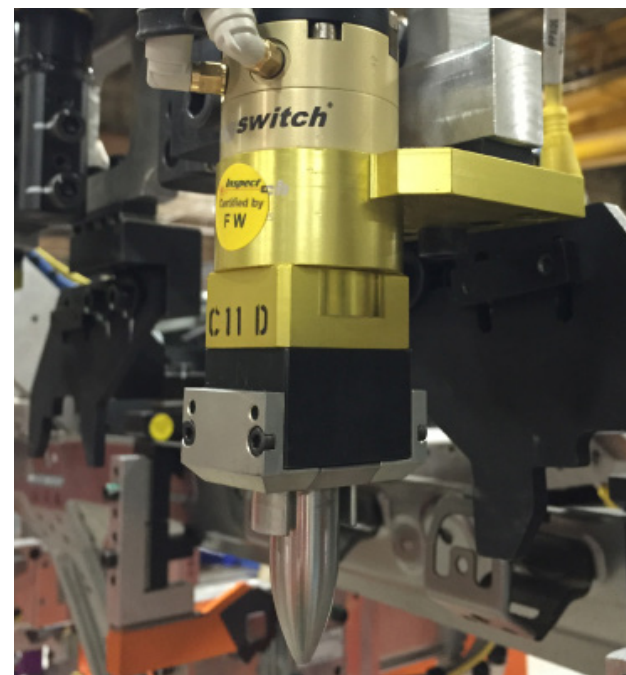
Tool Accessories & Customizations

Pin Clamps

Combine Magswitch clamping technology with location accurate pin positioning. AR-Series units can be fitted with standard pin clamp pole shoe kits that allow for the addition of a custom locating pin. Custom pole shoe designs may also be utilized if necessary. Please send designs and questions to applications@magswitch.com for design assistance and review.



Product Name	Part Number
AR20 Pin Clamp Pole Shoe Kit	8800409
AR30 Pin Clamp Pole Shoe Kit	8800410
AR40 Pin Clamp Pole Shoe Kit	8800411
AR50 Pin Clamp Pole Shoe Kit	8800412



Mounting Options



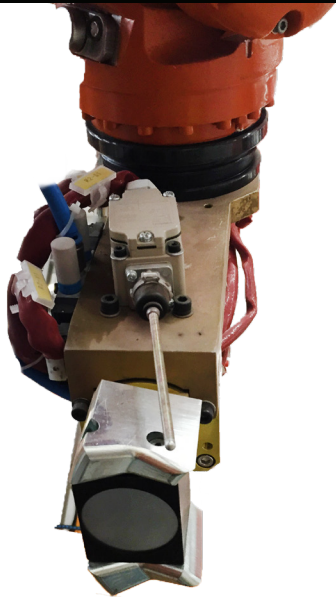
Product Name	Part Number
M15AY Ball	8800334
M15AY Apple	8800345
M20/M30AY Ball	8800335
M20/M30AY Apple	8800346
M15 Ball	8800245
M15 Apple	8800246
M20 Ball	8800243
M20 Apple	8800244
M30 Ball	8800242

Product Name	Part Number
M30 Apple	8800226
M40 Ball	8800235
M40 Apple	8800236
PLAY20x4 Ball	8800250
PLAY20x4 Apple	8800251
AR20 Vertical Enclosure Mount	8800405
AR30 Enclosure Mount	8800691
4-hole NAAMS Ball Mount	8800505



Mounting accessories make tool fit-up a breeze, connecting to readily available EOAT components. For details about these accessories, please contact your Magswitch representative.

Pole Shoe Customizations



- Match geometry of target component
- Improve performance on irregular shapes
- Increased versatility; Change shoes to handle a variety of components
- Multiple component shapes can be designed into a single pole shoe
- Optimizes magnetic flux circuit
- Enhances performance when handling non-flat workpieces
- Allows flexibility in multiple profile handling
- Like routing a wire in an electrical circuit, magnetic field follows pole shoe profile
- Mild steel w/ coating

Custom Armor Kits



- Add armor to Magswitch tools to protect magnets and improve product lifetime
- Recommended for random bin picking applications and anywhere impacts to the magnet housing is possible
- Armor may be custom designed to meet your needs

Mounting Cradle



- Custom mounting structure allows for mounting directly to robot wrists or existing end of arm tool structures
- The durable 7075 aluminium combined with sleek styling makes for a truly premium product



For design and fabrication of custom pole shoes, armor kits and mounting cradles or if you need additional sealing, please contact Magswitch with your application requirements to identify a suitable solution to meet your needs!

Application Services

In addition to groundbreaking products, Magswitch offers the expertise and resources to assist customers with their design and application challenges. Contact one of our knowledgeable sales representatives for advice on fixture, pole shoe, guarding and multiple magnet designs to achieve the best performance possible for your application.

If you need more than a design, we've got you covered in the fabrication department as well—at a fraction of the cost of a machine shop, Magswitch can help you customize a range of components to expand the usability of your tool.

Application Engineering Process

Phase 1: Collection of Application Details & Initial Evaluation

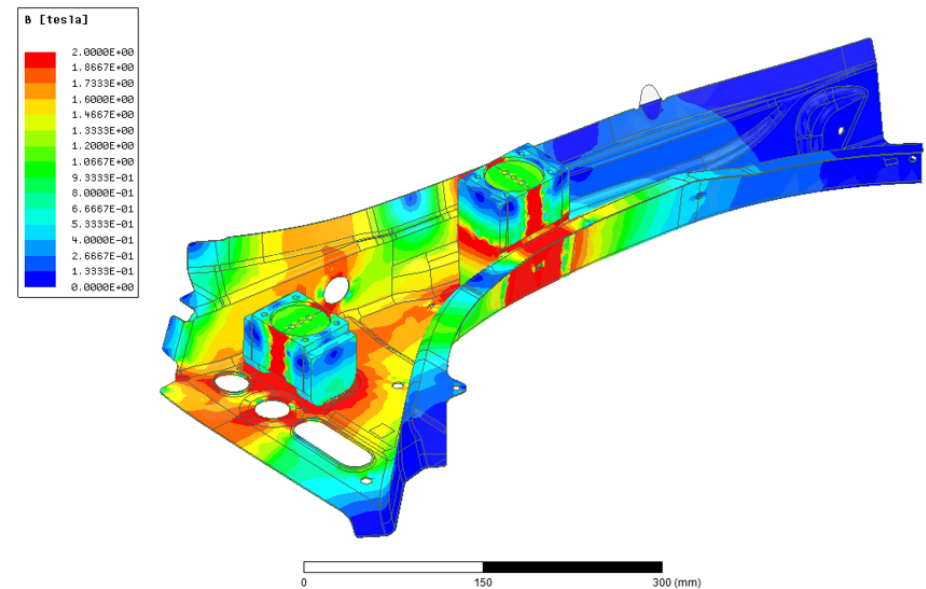
The 6 critical elements to selecting a tool are Material Grade - e.g. AISI 1020, Thickness, Weight, Shape, Surface Condition - e.g. coatings, treatments, roughness and Motion Profile.

Phase 2: Detailed & Customized Proposal

The detailed proposal includes the overview of application details, tool selection, tool placement on target component, pole shoe design suggestion if necessary, accessory design suggestion, ANSYS magnetic FEA analysis if required, and breakdown of safety factor analysis.

Phase 3: Final Design & Delivery

After selecting Magswitch as the specified tool for the application, Magswitch engineers will complete detailed designs for pole shoes and accessories in order to produce and deliver components to meet project timelines.



Cutting Edge Analysis

In addition to application design assistance, Magswitch offers ANSYS magnetic analysis to confirm holding force and validate pole shoe designs. Magswitch prides itself on having one of the most knowledgeable distribution networks and a team of engineers to handle any application presented. It is highly recommended that you contact your local distributor for application assistance on every project. Many factors determine the performance of a magnet and all should be accounted for before selecting your tool.



Contact Us Today!

If you are looking for a custom application, our Application Engineering team can assist you from design to delivery!

Email us at applications@magswitch.com

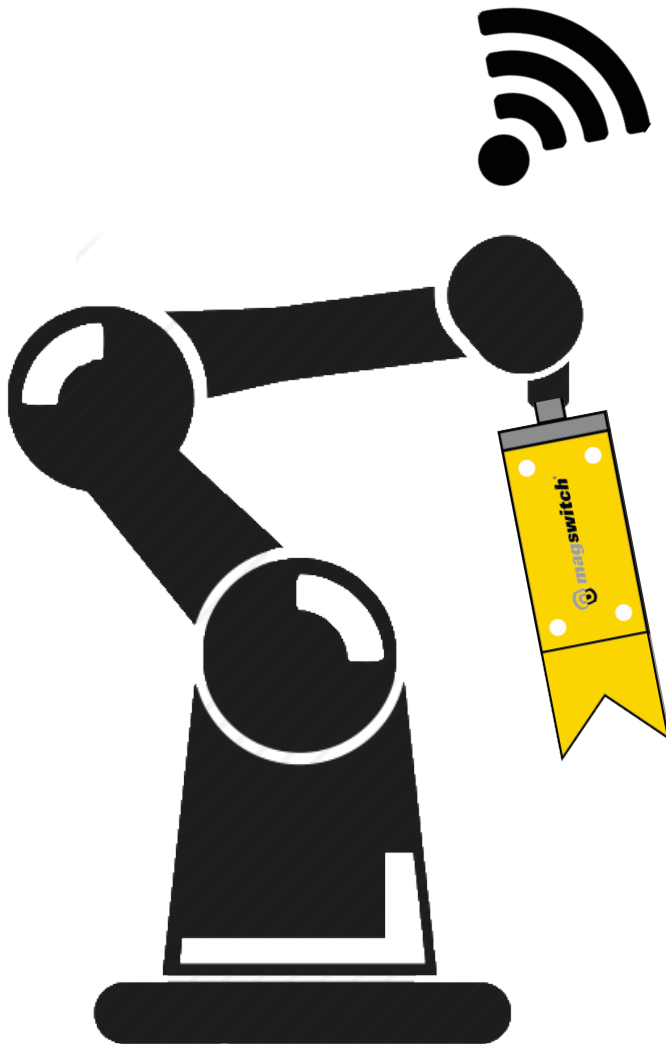
Call us at +1(303)468.0662

Visit us at www.magswitch.com/automationsolutions

Industry 4.0

Magswitch believes in constant innovation. With the development of our smart tool line, Magswitch is taking another step towards Industry 4.0. Robust real time tool feedback delivered to centralized location will allow operators to monitor production cells in order to maintain efficiency goals. We envision a tool that tells you when it needs to be serviced!

**CLOUD
COMPUTING**



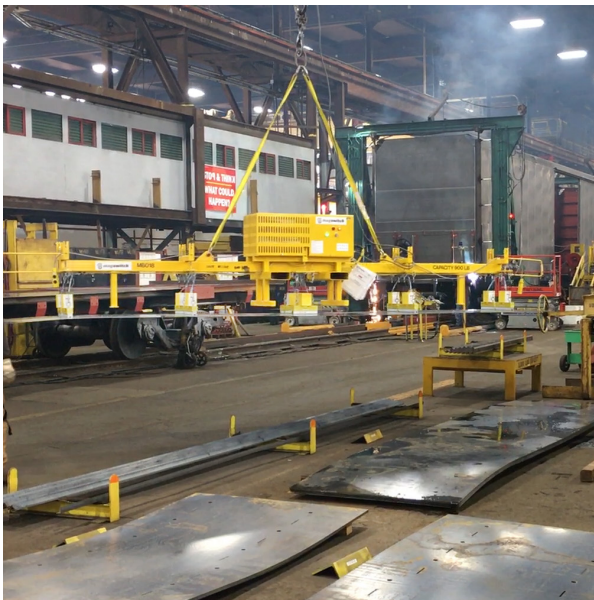
Heavy Lifting Solutions

Combining the patented Magswitch Technology with plate handling systems, Heavy Lifting Solutions has the answers for your plate handling applications. Eliminate time consuming handling of grabs and chains when you load and unload your burn tables. From manual systems to fully integrated robotic systems, Application Engineers will work side by side with the Magswitch team from design phase to project completion.

Have a Heavy Lifting Solution?

Contact our Application Engineering Team at heavyliftingsolutions@magswitch.com or visit us magswitch.com/heavyliftingsolutions or call us at +1 (303) 468.0662.

Custom Lifting Solutions



Custom Lifting Application at Gunderson Marine

From small plate applications (4'x8', 5'x10' & 6'x12') to large (8' to 10' x 15' to 60') and to thin material as low as 12 gauge, we will custom design a solution to your specific application.

RetroFit Lifting Solutions



Retrofit Application at Gunderson Marine

If you have a custom application or an odd problem that needs a solution, Magswitch lifters can be adapted to existing spreader bars and retrofitted to keep conversion costs down.

Ergonomic Lift Assist



Press Brake Application at Buyer's Products

Where physical stress due to manually lifting and positioning becomes an issue, Magswitch offers ergonomic material handling equipment that is designed and built to fit each specific application. With safety the most important goal, workplace productivity and efficiency is maximized with each design.



The Magswitch Advantage

Safety

Our lifters are designed to be 'fail safe' since there is no need of any power during a lift. With positive indication of magnetic circuit, operator can confidentially perform lift knowing the plate is fully attached. Magswitch offers Electric, Pneumatic or Manual for 'on-off' actuation.

Performance

Magswitch technology applies maximum hold force at shallow depths enabling consistent strong hold force on thin and thick steel. Our products give consistent, powerful results. 1/3rd the magnet weight of our competitors.

Flexibility

Magswitch products has flexible options to handle your lifting needs & adapt to odd or round shapes.

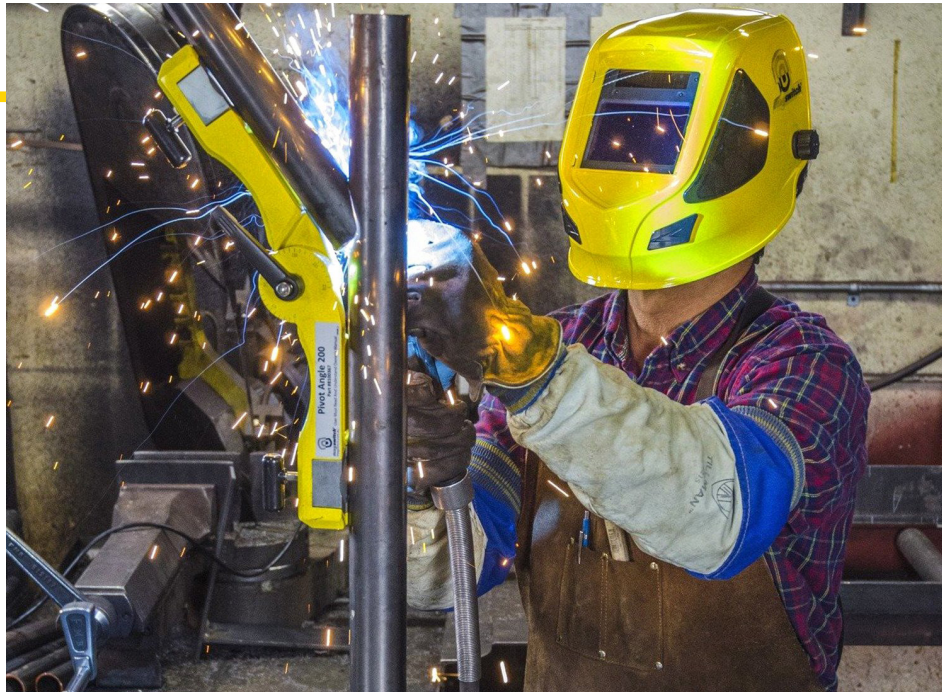
Downtime

Downtime with Magswitch is eliminated unlike traditional steel lifting systems. With a 100% duty cycle, no more standing or waiting around.

Cost Savings

Electromagnetic and vacuum lifting systems are costly in the long term when it comes to energy and maintenance costs. Magswitch 'greentech' technology will offer you significant savings in energy and repairs while increasing productivity.





Other Magswitch Applications

Magswitch products are engineered to drive productivity, speed and safety in several other applications such as welding, fabrication, woodworking, material handling, lifting and drilling. Large sheet leveling, sheet de-stacking, grounding, drilling and lifting are performed significantly faster and much more safely with our products. The true ON and OFF capabilities of Magswitch technology has created a whole world of applications that make up a part of our manual product line.

Applications

- Welding & Fabrication
- Material Lifting Tools
- Infrastructure
- Woodworking
- Shipyards & Marine
- Heavy Fabrication
- Material Handling & Alignment

Products in this lineup

Ground Clamps, Squares, Jigs, Mounts, Drills, Angle Tools, Vises, Tethers, Woodworking Tools, Dolly, Heavy Lifters, Hand Lifters, Extenda-Lifts and more!

Have a Custom Product?

Magswitch Technology provides custom product solutions. We provide a whole range of expertise from design, engineering, manufacturing all the way to product delivery, follow up and marketing.

Combining our technology with expertise, we can create specialized products that fit your needs, and budget.

Contact our Application Engineering Team at
customproducts@magswitch.com
 or call us at +1.303.468.0662.

*Want more information on our Manual line? Find our Catalog at
 Online: www.magswitch.com/catalogs
 Call: +1 (303) 468.0662*



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Why are Magswitch colors yellow?

In 2005, Magswitch decided to support a junior cycling team. With safety in mind, team jerseys were made yellow to make sure the riders can be easily seen on the roads. In 2007, when Magswitch created its image and colors for our tools, yellow was again the obvious choice given our commitment to safety with our tools all over the world. As a result, we launched our new safety logo in the spirit of our commitment to making your workplace safe.



Customer Service: cs@magswitch.com

Marketing: marketing@magswitch.com





Heavy Lifting Solutions: heavyliftingsolutions@magswitch.com

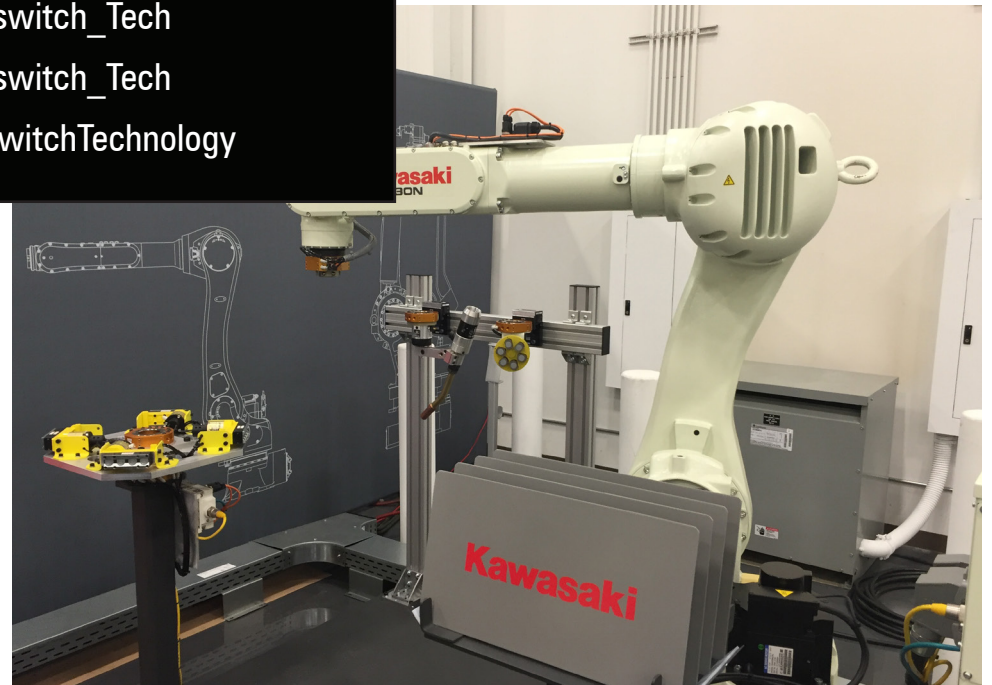
Custom Products: customproducts@magswitch.com

Automation Solutions: applications@magswitch.com



Connect with Magswitch!

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