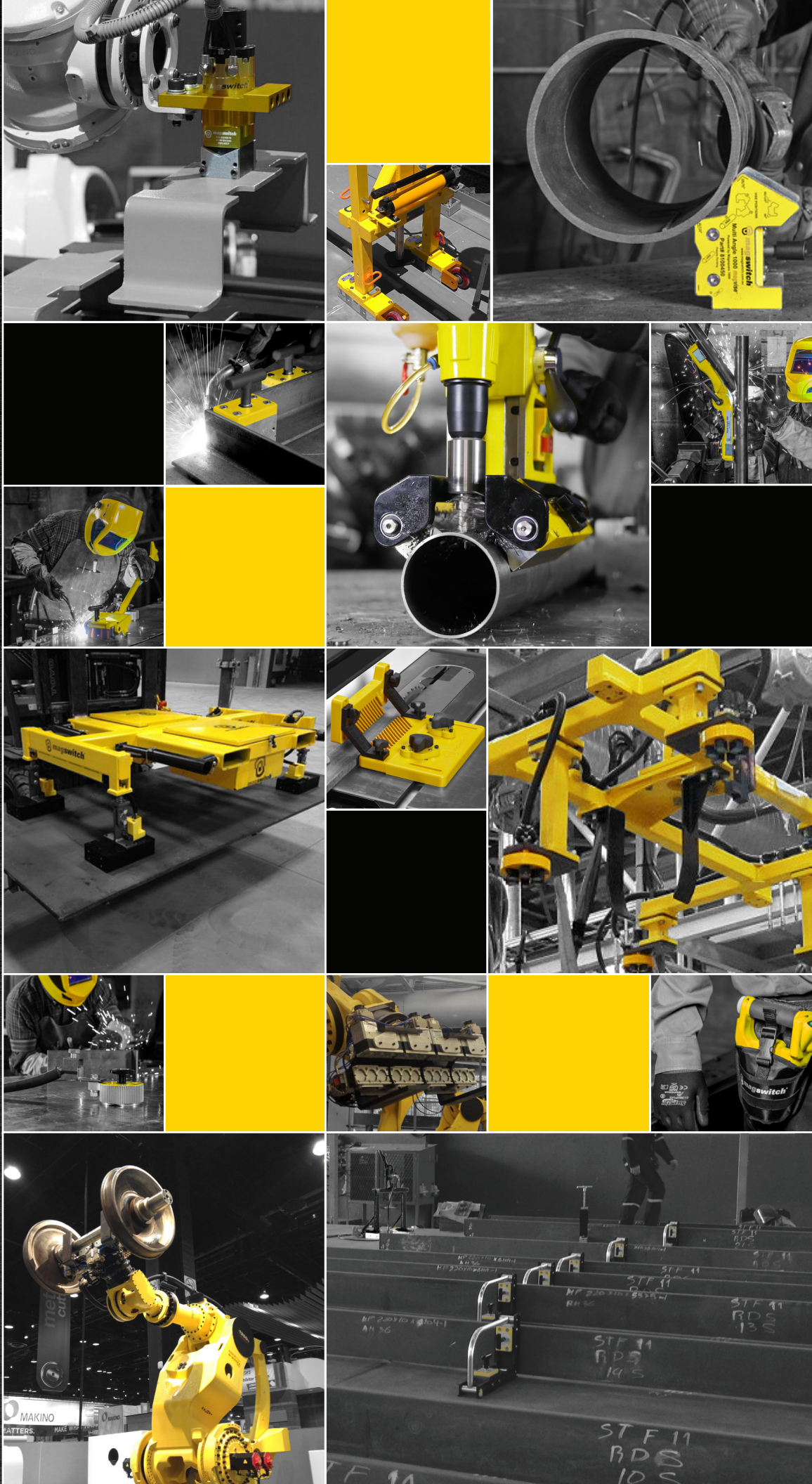


# magswitch®

Changing the way things are done.





# Changing the way things are done.

Magswitch is a mechanical device that turns a permanent magnetic field completely ON and OFF. The advantages provided by Magswitch Technology offer significant, new capabilities in steel fabrication and handling.

### A New Way of Thinking

Groundbreaking advancements in technology provide early adopters with an opportunity to gain a competitive edge. Those who expand on previous thinking by harnessing this uncharted potential early on often gain the greatest advantage—something metal handlers across the globe have experienced after transitioning to Magswitch magnetic tools from traditional technologies.

While permanent magnets have been a part of welding and fabricating for a long time, they’ve historically been left to do small work, dismissed as a difficult method of handling large pieces of steel. Magswitch Technology changes that, challenging conventional clamping and fit up methods in all steel fabrication by forever improving the safety, productivity and efficiency of metalworking operations from small-scale welding to shipbuilding and industrial automation.

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### What Does Magswitch Mean for You?

If you work with steel, Magswitch translates into a simple bottom line: cost-savings, safety improvements and easier handling. Every process, from receiving steel to moving and fabricating it, can directly benefit from implementing a Magswitch tool. Our expanding product line includes powerful heavy lifters, robotics tools, welding tools and more.

### All Magswitch products advantages:

- Complete ON/OFF control
- Precise placement: no fighting magnets
- Super strong hold: the magnets do the big work
- Exceptional hold on thin steel



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



*Magswitch products are a green technology which endure the power of rare earth magnets without electricity.*



**Look for our new high heat tools.** Magswitch tools currently handling up to 742° Fahrenheit (350° Celsius).



Every Magswitch product complies with the European health, safety and environmental protection legislation.

## Safety is our #1 Priority!

At Magswitch, we are dedicated to safety. We consider safety in everything we do. If you work around steel, safety is the first consideration.

Fewer hands on the job, touching steel, means a safer workplace. Safety is our primary design consideration - easy actuation, lighter lifting, stability control and lift-to-shear capabilities all tie back to an emphasis on safety.

Magswitch automation tools are designed with fail-safe operation in mind. In case of a loss of air pressure, our magnets will remain in the most recent position, either ON or OFF.

Magswitch heavy lifting magnets abide by ASME BTH-1 and B30.20 standards and include fail-safe locking mechanisms to ensure a load is not released without operator interaction.

## About Magswitch Technology

Magswitch Technology is an Australian corporation, with its headquarters in Colorado, USA. Magswitch has designed and developed a new technology in switchable magnets, creating a platform for the introduction of products across global markets that are significantly “Changing the way things are done”.

Initially, technology drove the company’s corporate strategies, with a business model focused on protection of its “simple but elegant” magnetic technology.

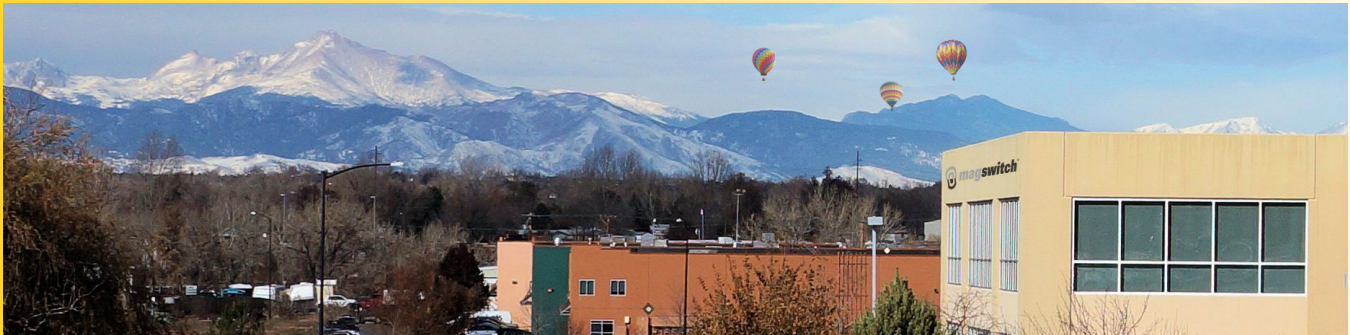
Today, with numerous patents and patents pending in all industrialized markets across the globe, Magswitch has evolved into an integrated business. In addition to research and development facilities on three continents, Magswitch now delivers product design, application engineering, manufacturing and product distribution globally.

Magswitch is committed to a business model that identifies key industry partners, allowing the corporation to leverage its technology and products through recognized global distributors.

The Magswitch culture is firmly established around innovative solutions for Customers and Industry Groups. A commitment to Constant Improvement Process (CIP) ensures we are working today on customer needs for tomorrow. As Industry innovation drives automation, Magswitch is developing a reputation as the partner who delivers first and functional solutions. In welding, lifting and automation, Magswitch is committed to treating industry problems with urgency and inclusive solutions that are cutting capital and recurrent costs, shortening delivery times and driving new standards in ISO efficiency deliverables.

The Magswitch management team is made up of visionary leaders and enthusiastic youth who constantly strive for innovation within a “can do” culture.

*“The key to our success is our love of competition, as this is what drives our DNA.”*





## Introduction

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## Faster

Magswitch products are engineered to drive productivity for professional welders and fabricators. Large sheet leveling, sheet de-stacking, weld grounding and many more applications are performed significantly faster with Magswitch products. Magswitch magnets more than pay for themselves with increased productivity alone.

## Safer

At Magswitch, safety is our primary consideration. Using Magswitch eliminates the need for human contact with steel, significantly reducing the risk of injuries. Our magnets do not require power to stay ON, creating a safer work environment.

## Easier to Use

Easier to Use – The true ON/OFF capabilities of Magswitch tools create a platform that is easier to use than other competitive products. No residual magnetism allows easy removal and cleaning of our magnets. With a powerful hold on thin material, Magswitch can be used in many more applications compared to traditional magnetic technology.



# Welding & Fabrication





# MagSquares



High Heat Available  
Upon Request



Part #	1000	600	400	165
8100099	8100106	8100238	8100494	
Magnet Strength =	1000 lbs (454 kg)	600 lbs (272 kg)	400 lbs (181 kg)	150 lbs (68 kg)
Height =	5.8 in (146.6 mm)	4.1 in (104.0 mm)	3.6 in (90.7 mm)	2.5 in (63.3 mm)
Width =	2.8 in (72.0 mm)	2.0 in (51.5 mm)	1.6 in (41.3 mm)	1.2 in (30.8 mm)
Length =	4.3 in (108.0 mm)	3.0 in (75.0 mm)	2.5 in (64.0 mm)	1.9 in (48.0 mm)
Weight =	8.0 lbs (3.6 kg)	3.2 lbs (1.4 kg)	2.1 lbs (0.9 kg)	0.7 lbs (0.3 kg)



## The most versatile workholding and fixturing tool ever.

A "must have" tool for every welding professional.

- Incredible strength
- Fast, precise positioning
- Mounts anywhere – no limitations like clamps
- Magnetic grip on three sides
- Mounts to flat and pipe
- Pre-tapped holes on four sides for mounting
- Great for making your own fixtures
- Magnet turns completely off - stays clean!
- Great for supporting guides and walls.
- Just a simple 180° turn of the knob ON or OFF



Scan link or go to <http://youtu.be/FsvUMzH56t4>



Align two pieces of steel – flat or round.



Helping hand – a temporary support to hold a part or tool on a vertical wall.



Great for making your own fixtures.



Secure steel for fabricating or cutting.



Use as a guide anywhere on a steel or cast iron table. No limitations like clamps.



Fabricate angles quickly; pull corners together with hold on multiple sides.



Strong hold provides make shift vise.



Great for making your own fixtures.

# MagDrill Disruptor 30

## The Next Evolution in Magnetic Drilling!

Superior magnetic performance on a wide range of steel - flat or curved surfaces!

Magswitch patented technology now with a powerful patent-pending pivoting base!

- **SAFER** – Magnets require no electric power and will not release in the event of a power failure
- **LIGHTER** – Weighs less than 25 lbs.
- **STRONGER** – Maintains strong grip on steel as thin as 1/8"
- **EASIER TO USE** – Automatically conform to any pipe 3" or larger in diameter
- **EFFICIENT** – One tool for flat or round surfaces without the need for expensive adapters– save time and money
- **POWERFUL** – 8.2 amp motor
- **CAPACITY**– Cuts holes up to 1-3/16" diameter, up to 2" deep



Scan link or go to <http://bit.ly/2bDE74f>



» Flip to page 16 for information on MagDrill cutters and accessories.



Magnetic Ground Clamps



- ON/OFF Magnetic Ground Clamps let welders quickly set up, weld and move on to the next job
- All new fin design lowers temperature by almost 27%
- Higher amperage available with new 800 model
- Stronger hold in the shear (vertical) position allows for use with heavy gauge ground cable
- No more tacking on tabs and searching for a ground location
- Fast setup, grounds instantly on plate or pipe



Stays clean. Turn off Magswitch and wipe away debris.

	800 Amp	600 Amp	300 Amp
Part #	8100552	8100747	8100746
Magnet Strength =	300 lbs (136 kg)	200 lbs (89 kg)	90 lbs (40 kg)
Height =	2.9 in (74.0 mm)	2.6 in (66.0 mm)	2.3 in (57.0 mm)
Width =	4.7 in (119.9 mm)	4.0 in (100.8 mm)	1.9 in (49.0 mm)
Length =	3.9 in (98.6 mm)	2.7 in (69.0 mm)	2.9 in (73.0 mm)
Weight =	3.8 lbs (1.6 kg)	1.8 lbs (0.8 kg)	0.8 lbs (0.4 kg)

Strong grip on flat or round surfaces.



Scan link or go to <http://bit.ly/1RGCuU4>



Pivot Angle 200

NEW!



Odd angles in seconds.



Scan link or go to <http://bit.ly/1NP97Jt>

	200
Part #	8100367
Magnet Strength =	200 lbs (90 kg)
Height =	9.4 in (240.0 mm)
Width =	3.9 in (97.9 mm)
Length =	9.4 in (240.0 mm)
Weight =	3.5 lbs (1.6 kg)

Magswitch Pivot Angle offers a range of angles from 25-270 degrees. Each axis features a Magswitch with a 200 lbs (90kg) hold capability. A single pivot point is located on the elbow. The elbow joint locks and unlocks quickly with a lever. With a single pivot point, the elbow joint locks and unlocks quickly. On each axis, a Magswitch is exposed on a side to enable the tool to secure to a table or wall, while simultaneously holding the work piece. Pivot angle is perfect for repetitive work on all angles.



Degree angle indicator on elbow.



Each magnet holds on two sides.

MagVises



- SAFER! – Hold small to medium size parts in place for grinding
- LIGHTER! – Weighs less than 10 lbs.
- STRONGER! – Available in 1000 and 1500 lbs. strengths
- EASIER TO USE! – Grinding debris just falls/wipes away when magnet is turned off
- EFFICIENT! – Reduce setup and grinding time



Scan link or go to <http://youtu.be/guqrc3nDr20>



	1000	1500
Part #	8100450	8100897
Magnet Strength =	1000 lbs (454 kg)	1500 lbs (681 kg)
Height =	5.4 in (138.0 mm)	6.3 in (160.4 mm)
Width =	4.3 in (110.0 mm)	6.4 in (161.7 mm)
Length =	5.9 in (149.8 mm)	7.1 in (179.7 mm)
Weight =	9.7 lbs (4.4 kg)	21.0 lbs (9.5 kg)

Mini Angles



Scan link or go to <http://youtu.be/3lbqXYNgkJ4>

	Multi Angle 400	Mini Multi w/ 200 Amp Ground	Mini Multi	Mini
Part #	8100438	8100351	8100350	8100352
Magnet Strength =	400 lbs (181 kg)	150 lbs (67 kg)	90 lbs (40 kg)	90 lbs (40 kg)
Height =	3.8 in (95.5 mm)	3.4 in (87.0 mm)	2.5 in (65.0 mm)	2.1 in (53.6 mm)
Width =	2.6 in (65.0 mm)	1.6 in (42.0 mm)	1.2 in (32.0 mm)	1.2 in (32.0 mm)
Length =	5.1 in (129.0 mm)	3.6 in (90.5 mm)	2.8 in (72.0 mm)	2.3 in (59.0 mm)
Weight =	2.6 lbs (1.2 kg)	1.1 lbs (0.5 kg)	0.4 lbs (0.2 kg)	0.4 lbs (0.2 kg)

Mini Angle offers a 45/135° and 90°

- Reduce setup time
- Stays Clean - Longer Life
- More angles in one product
- Stronger grip available in larger sizes
- ON/OFF - When off, metal debris falls away



Mini Multi Angle with temporary ground for quick tacking



Each Multi Angle offers several common angles: 45/135°, 60/120°, 75/105°, and 90°



Manual Hand Lifters

	400 Dual	235 Dual	400 Fixed	235 Fixed	60-M
Part #	8100822	8100821	8100810	8100795	8100359
Magnet Strength =	800 lbs (363 kg)	470 lbs (213 kg)	400 lbs (181 kg)	235 lbs (106 kg)	235 lbs (106 kg)
Height =	5.3 in (133.3 mm)	4.4 in (111.4 mm)	5.0 in (127.0 mm)	4.1 in (105.1 mm)	5.7 in (145.1 mm)
Width =	5.2 in (133.1 mm)	5.2 in (132.8 mm)	4.8 in (121.0 mm)	3.0 in (76.5 mm)	4.7 in (120.0 mm)
Length =	21.3 in (540.9 mm)	21.9 in (557.5 mm)	4.9 in (123.7 mm)	5.0 in (127.0 mm)	5.3 in (134.3 mm)
Weight =	5.9 lbs (2.7 kg)	4.3 lbs (1.9 kg)	2.4 lbs (1.1 kg)	1.6 lbs (0.7 kg)	1.3 lbs (0.6 kg)

NEW!



FASTER, EASIER & SAFER...

No more picking up sharp or hot steel with your hands

- Complete ON/OFF Magswitch magnet control
- Safely pick up hot, sharp or dirty steel
- More powerful - better resistance to pry off
- Ideal for removing small parts from a cutting table
- Increased efficiency for faster and safer picks
- Fast pick up and transport of small steel loads
- Add safety and convenience to every workstation
- Pick, place, slide and position steel without using your fingers
- One-handed operation for harder to reach parts
- Ideal for small steel handling, dragging sheet, picking, placing and pulling parts out of burn table or handling scrap



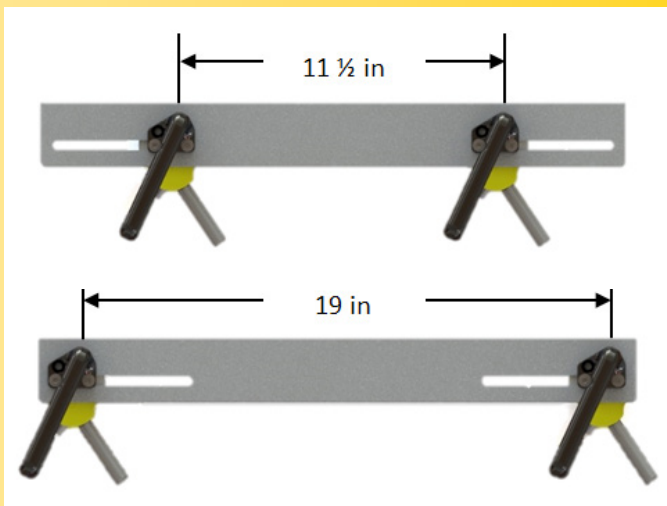
Pivot handle allows use as a hand lifter or a sheet dragger.



Pipe groove for transporting pipe.



Dual Lifter Adjustability Range



Scan link or go to <http://bit.ly/1jQuH8D>

Shallow field magnet de-stacks thin steel



Hands off sharp edges & hot material

Electric Hand Lifter

	60-CE w/ holster
Part #	8800487*
Magnet Strength =	235 lbs (106 kg)
Height =	8.2 in (209.0 mm)
Width =	2.9 in (75.0 mm)
Length =	6.7 in (173.0 mm)
Weight =	2.4 lbs (1.1 kg)

\*Includes belt holster



Faster and safer handling of steel.



Push button ON/OFF control. Ideal for fast, repetitive lifting.



Perfect for removing parts and cut outs from cutting tables. The cordless hand lifter holds hot, sharp, dirty steel with the press of a button!



NEW!

The world's first Cordless Electric (CE) Hand Lifter! The Hand Lifter 60-CE is a must for every metal fab shop. Ideal for pulling parts out of a cutting table, picking up steel to place on a work table, in a fixture or handling scrap parts.



Scan link or go to <http://youtu.be/655UAQ0TyDQ>



Includes charger and two rechargeable batteries.

Replacement Parts:

4 Volt Rechargeable Batteries (2-Pack) – #8800053  
Battery Cap Cover - #8800096

Battery Chargers:

US/CAN – #8800054  
UK/SA – #8800054UK  
Europe – #8800054GE  
Australia – #8800054AU

Extenda-Lifts



Scan link or go to <http://youtu.be/vklagoSHGv8>

- Safer - Pick up and move steel without bending over
- Pick up steel from the floor or cutting table with ease
- Great for picking up hot, sharp or dirty steel
- Two sizes available
- Ideal for cities and utilities, valve box and small lid removal

It is always a concern when you have to reach down or bend over to pick up steel. That's why our Extenda-Lift does this for you. Easy on the back!



Super strong hold.



Picks up flat or round shapes.





BoomerAngles

	400	600
Part #	8100453	8100090
Magnet Strength =	400 lbs (181 kg)	600 lbs (272 kg)
Height =	10.2 in (258.0 mm)	10.1 in (258.0 mm)
Width =	4.3 in (109.0 mm)	6.6 in (169.0 mm)
Length =	10.2 in (258.0 mm)	10.1 in (258.0 mm)
Weight =	6.6 lbs (3.0 kg)	9.7 lbs (4.4 kg)



Holds flat and round — perfect for working with pipe and fence set ups.



Magnets rotate for virtually unlimited angles.



- Offers virtually unlimited angles with a rotating MagSquare at the end of each axis
- Fixed 90° angle on the inside and outside, or adjust to any angle in between
- Incredible power and precision control
- Adjustable - Easy to use



Scan link or go to <http://youtu.be/Z-OrHiDsYhM>

90 Degree Angles

	165	400	600	1000
Part #	8100548	8100454	8100495	8100503
Magnet Strength =	150 lbs (68 kg)	400 lbs (181 kg)	600 lbs (272 kg)	1000 lbs (454 kg)
Height =	8.0 in (205.0 mm)	10.4 in (262.9 mm)	11.2 in (288.0 mm)	11.3 in (287.0 mm)
Width =	1.9 in (47.0 mm)	5.2 in (133.2 mm)	4.1 in (104.0 mm)	5.7 in (145.0 mm)
Length =	8.0 in (205.0 mm)	10.4 in (262.9 mm)	11.2 in (288.0 mm)	18.6 in (474.0 mm)
Weight =	1.8 lbs (0.8 kg)	6.2 lbs (2.8 kg)	8.2 lbs (3.7 kg)	21.2 lbs (9.6 kg)



MagSquares can be repositioned or reversed on each axis.



New 90 Degree Angle 1000 for heavy fabrication work.



Magnets positioned away from joint to prevent arc blow.

- Fixed 90° welding angle
- Incredible power and precision control
- Adjustable - Slide up or down on each axis
- Reversible - inside or outside
- Size for any job - big or small
- Use additional MagSquares for increased strength



Scan link or go to <http://bit.ly/2bBw25e>

MagHooks

	25	40
Part #	8100012	8100006
Magnet Strength =	75 lbs (34 kg)	200 lbs (91 kg)
Height =	3.5 in (89.0 mm)	4.0 in (103.0 mm)
Width =	1.6 in (40.0 mm)	2.7 in (67.9 mm)
Length =	1.9 in (47.2 mm)	2.7 in (69.0 mm)
Weight =	0.5 lbs (0.2 kg)	1.9 lbs (0.9 kg)



Attaches to flat or round surfaces.



Hang tools, nuts or bolts near your work area.

- The perfect helping hand
- Safer work environment - Hang tools, lights, wires, hoses, cables and more
- ON/OFF with turn of the handle
- Convenient and easily move from job to job



Scan link or go to <http://bit.ly/2bSvBkM>

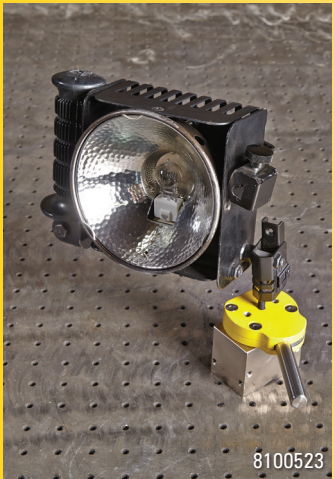


MagMounts

	150	235	400	600
Part #	8100579	8100451	8100523	8100580
Magnet Strength =	150 lbs (68 kg)	235 lbs (106 kg)	400 lbs (182 kg)	600 lbs (272 kg)
Height =	1.6 in (40.0 mm)	1.7 in (44.2 mm)	2.6 in (65.0 mm)	2.8 in (71.0 mm)
Width =	2.2 in (58.8 mm)	2.7 in (68.0 mm)	3.3 in (82.5 mm)	4.1 in (104.4 mm)
Length =	3.1 in (78.2 mm)	3.8 in (97.7 mm)	4.6 in (116.0 mm)	4.7 in (120.0 mm)
Weight =	0.7 lbs (0.3 kg)	1.2 lbs (0.5 kg)	2.4 lbs (1.1 kg)	3.6 lbs (1.6 kg)



High Heat Available  
Upon Request



- Side-actuation handle leaves the top of the tool free for mounting a variety of accessories
- Easy mounting - multiple threaded holes on the top
- Great for mounting of cameras, lighting, gauges and other devices

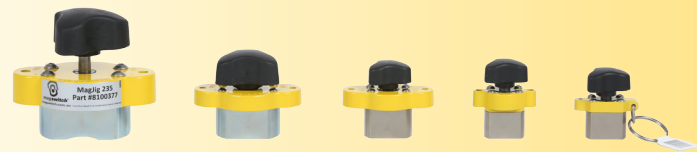


## MagJigs



High Heat Available  
Upon Request

	235	150	95	60	60 Keychain
Part #	8100377	8110005	8110004	8100818	8100514
Magnet Strength =	235 lbs (106 kg)	150 lbs (68 kg)	95 lbs (43 kg)	60 lbs (27 kg)	60 lbs (27 kg)
Height =	3.1 in (78.3 mm)	2.1 in (52.1 mm)	1.8 in (46.6 mm)	1.9 in (49.1 mm)	1.7 in (44.1 mm)
Width =	2.4 in (60.0 mm)	1.7 in (44.0 mm)	1.3 in (34.0 mm)	1.1 in (26.8 mm)	1.1 in (26.8 mm)
Length =	3.5 in (88.0 mm)	2.6 in (67.0 mm)	2.3 in (57.0 mm)	1.6 in (39.5 mm)	1.5 in (39.3 mm)
Weight =	1.0 lbs (0.5 kg)	0.5 lbs (0.2 kg)	0.3 lbs (0.1 kg)	0.2 lbs (0.1 kg)	0.2 lbs (0.1 kg)



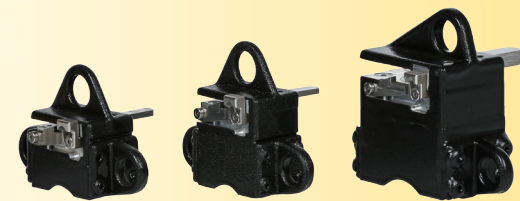
MagJigs are ideal for downward pressure clamping and come with a 3/4 inch standoff for flush mount. Simply drill a hole in the fixturing material and place the clamp in. The MagJigs come with screw holes so you can secure the jig in the fixture. We recommend at least two MagJigs per fixture to minimize slippage.



Scan link or go to <http://bit.ly/2bVFcqH>



## Marine Products



Mounts to flat or curved surfaces.



Nothing like bouncing around or fighting currents when doing tough work underwater. Tether securely and easily with Magswitch Marine Tethers.



8100051

Tethers personnel or gear.

	300	600	1000
Part #	8100111	8100077	8100051
Magnet Strength =	240 lbs (109 kg)	600 lbs (272 kg)	1000 lbs (455 kg)
Height =	4.3 in (108.1 mm)	5.0 in (128.1 mm)	6.1 in (155.5 mm)
Width =	4.9 in (124.4 mm)	4.9 in (124.4 mm)	6.2 in (158.3 mm)
Length =	6.5 in (164.0 mm)	6.3 in (161.0 mm)	7.6 in (194.0 mm)
Weight =	2.9 lbs (1.3 kg)	5.8 lbs (2.6 kg)	10.2 lbs (4.6 kg)

### Ideal for underwater welding and tethering

- Tether tools and equipment more securely
- Noise-suppressing coating
- Use in military and commercial applications
- Work on steel hull ships or structures
- Corrosive-resistant coating
- Marine-grade components

\*NOT FOR USE AS A FALL PROTECTION DEVICE\*

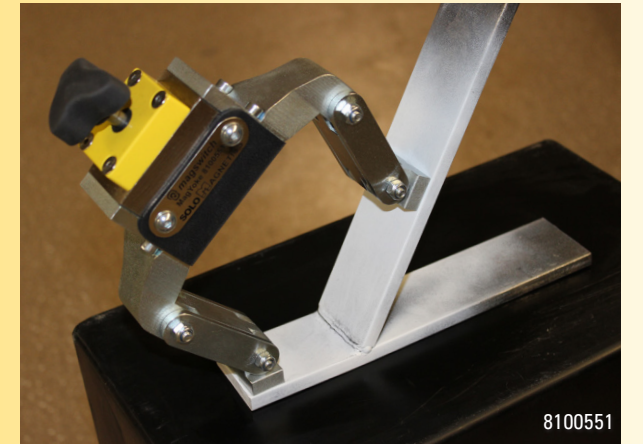
## MagYoke

	MagYoke
Part #	8100551
Magnet Strength =	5.8 lbs (2.6 kg)
Height =	5.3 in (134.6 mm)
Width =	6.4 in (162.6 mm)
Length =	1.9 in (48.3 mm)
Weight =	6.0 lbs (2.7 kg)



### Non-Destructive Testing of Weld Joints

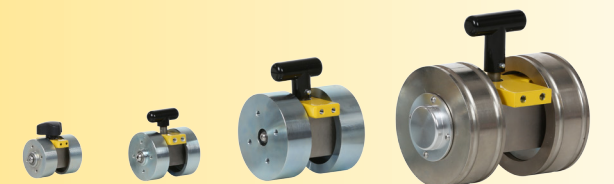
- Full Yoke system testing capabilities
- Using patented ON-OFF switchable magnets, test welds without an electrical power source
- OFF position allows tool to easily be removed from material
- Significantly reduces metal to metal sparking
- Lightweight and easy to use



8100551

## MagWheels

	95	150	600	1000
Part #	8100401	8100074	8100075	8100250
Magnet Strength =	38 lbs (17 kg)	65 lbs (29 kg)	292 lbs (133 kg)	528 lbs (239 kg)
Height =	2.2 in (55.7 mm)	2.8 in (71.2 mm)	4.8 in (121.7 mm)	6.5 in (164.4 mm)
Width =	1.6 in (41.0 mm)	2.0 in (52.0 mm)	3.6 in (92.0 mm)	5.0 in (127.0 mm)
Length =	2.2 in (56.2 mm)	2.7 in (69.2 mm)	4.0 in (101.1 mm)	7.1 in (180.4 mm)
Weight =	0.7 lbs (0.3 kg)	2.2 lbs (1.0 kg)	6.6 lbs (3.0 kg)	20.0 lbs (9.0 kg)

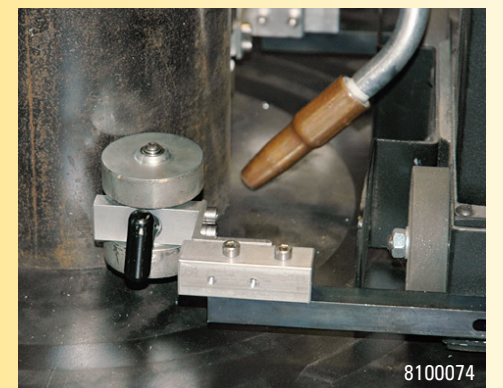


MagWheel provides all the features of a standard Magswitch on the move.

The Magswitch MagWheel offers powerful connection for drive units on any ferrous surface, enabling flat, vertical or inverse travel. This unique tool has magnetic rotating elements with the potential to automate. The magnetic flux path through the wheels means climbing, carrying and driving anywhere above or below a magnetic surface.

Applications include:

- Positioning and guiding
- Sheet feeding
- Pipe handling
- Fitting and fabrication
- OEM automation and fixturing applications



8100074

MagWheel illustrated on a Bug-O® automated welder.



# Magswitch Infrastructure Tools

Magswitch Infrastructure Tools provide an affordable alternative that makes handling manhole covers easier and safer. Compared to injury claim costs, cities improve the safety of removing manholes and valve box covers.

The Magswitch Valve Box Lifter provides unprecedented convenience and safety in removing the cover. Simply position the magnet over the valve lid, turn on with extended handle and remove.

The Magswitch Manhole Lifter reduces the chance of back and finger injuries caused from manual methods of lifting covers. A simple system, utilizing a dolly and a strong Magswitch magnet, enables fast setup and quick removal of manhole and utility covers.



## MagDolly Series

	Steel MagDolly	Aluminum MagDolly HD	MLAY1000x3	MLAY1000x4
Part #	8100433	8100927	8100403	8100418
Magnet Strength =	Magnet sold separately	Magnet sold separately	3000 lbs (1360 kg)	4000 lbs (1814 kg)
Overall Height =	52.8 in (1340.8 mm)	44.1 in (1120.0 mm)	10.4 in (264.5 mm)	9.9 in (250.8 mm)
Extended Height =	N/A	63.4 in (1611.1 mm)	N/A	N/A
Width =	28.5 in (723.4 mm)	27.6 in (701.6 mm)	7.7 in (195.4 mm)	7.7 in (195.4 mm)
Length =	75.3 in (1913.0 mm)	98.1 in (2490.5 mm)	10.7 in (271.3 mm)	13.8 in (350.3 mm)
Weight =	46.1 lbs (20.9 kg)	72.1 lbs (32.7 kg)	36.5 lbs (16.6 kg)	45.2 lbs (20.5 kg)



Easy ON/OFF magnet actuation.  
Complete control – stays clean.

WARNING: Magnets experience significant strength reduction on cast iron and uneven surfaces.

Reduce back injuries.  
Eliminate pinching your fingers.



Scan link or go to <http://youtu.be/X7S2nETEm7I>

- Dolly's work with any Magswitch lifting magnet
- Allows one user to move steel
- Safer and faster
- HD model allows for two users and rolls on uneven surfaces



The Manhole Lifter Dolly can be used with either the MLAY1000x3 or MLAY1000x4 depending on the size of the manhole cover. For cast iron manhole covers, the MLAY1000x3 is ideal for those that weigh up to 400 lbs. For anything heavier than 400 lbs., the MLAY1000x4 is recommended.

## Magnetic Valve Box Lifter

	600	1000
Part #	8100025	8130177
Magnet Strength =	600.0 lbs (272 kg)	1000 lbs (453 kg)
Height =	28.4 in (722.0 mm)	28.8 in (731.5 mm)
Width =	3.9 in (100.0 mm)	4.3 in (108.0 mm)
Length =	4.6 in (117.0 mm)	4.8 in (122.8 mm)
Weight =	5.3 lbs (2.4 kg)	9.8 lbs (4.4 kg)



The Extenda-Lift 600 is a lighter tool, designed for smaller covers. The Extenda-Lift 1000 is a heavy-duty version for lifting heavier items or covers with uneven surfaces.



Scan link or go to <http://youtu.be/IYlhy1Px03Q>

WARNING: Occupational Safety & Health Administration (OSHA) does not recommend lifting objects over 50 lbs by hand. Magnets experience significant strength reduction on cast iron and uneven surfaces.

# Replacement Parts and Accessories

Magswitch offers a variety of accessories and replacement parts for our tools. Poles shoes are replaceable and extend the life of magnets. Other accessories include handles, plungers, batteries, charges, bolts and more! A large variety of annular cutters are available as well. If you need an annular cutter or pilot pin not listed below, please call us with the details.



Replacement Rechargeable Batteries for Electric Hand Lifter



Scan link or go to <http://bit.ly/1xSad1H>

Scan to download our replacement parts list.



Replaceable Pole Shoes

## MagDrill Cutter Kits



Part #	Description	P/N Description Diameter x Depth (QTY)
8800539	HSS Annular Cutter Kit, 8 Piece	1801109 HSS Annular Cutter 9/16"x1" Depth (2)
		1801091 HSS Annular Cutter 11/16"x1" Depth (2)
		1801073 HSS Annular Cutter 13/16"x1" Depth (2)
		8800542 Pilot Pin 1/4"X4 15/16" IBC.K25 (1)
		8800607 Pilot Pin 1/4"X3" IBC.70 (1)

Part #	Description	P/N Description Diameter x Depth (QTY)
8800540	HSS Annular Cutter Kit, 10 Piece	1801109 HSS Annular Cutter 9/16"x1" Depth (1)
		1801091 HSS Annular Cutter 11/16"x1" Depth (1)
		1801073 HSS Annular Cutter 13/16"x1" Depth (1)
		1801095 HSS Annular Cutter 9/16"x2" Depth (1)
		1801075 HSS Annular Cutter 11/16"x2" Depth (1)
		1801070 HSS Annular Cutter 13/16"x2" Depth (1)
		8800542 Pilot Pin 1/4"X4 15/16" IBC.K25 (1)
		8800607 Pilot Pin 1/4"X3" IBC.70 (1)
		8800543 Pilot Pin 1/4"X6 1/8" IBC.K50 (1)
		8800608 Pilot Pin 1/4"X4" IBC.90 (1)

Part #	Description	P/N Description Diameter x Depth (QTY)
8800541	HSS Annular Cutter Kit, 12 Piece	1801110 HSS Annular Cutter 7/16"x1" Depth (1)
		1801109 HSS Annular Cutter 9/16"x1" Depth (1)
		1801066 HSS Annular Cutter 5/8"x1" Depth (1)
		1801091 HSS Annular Cutter 11/16"x1" Depth (1)
		1801122 HSS Annular Cutter 3/4"x1" Depth (1)
		1801073 HSS Annular Cutter 13/16"x1" Depth (1)
		1801126 HSS Annular Cutter 7/8"x1" Depth (1)
		1801117 HSS Annular Cutter 15/16"x1" Depth (1)
		1801076 HSS Annular Cutter 1-1/16"x1" Depth (1)
		1801071 HSS Annular Cutter 1-3/16"x1" Depth (1)
		8800542 Pilot Pin 1/4"X4 15/16" IBC.K25 (1)
		8800607 Pilot Pin 1/4"X3" IBC.70 (1)



## Types of Cutters



### HSS - High Speed Steel

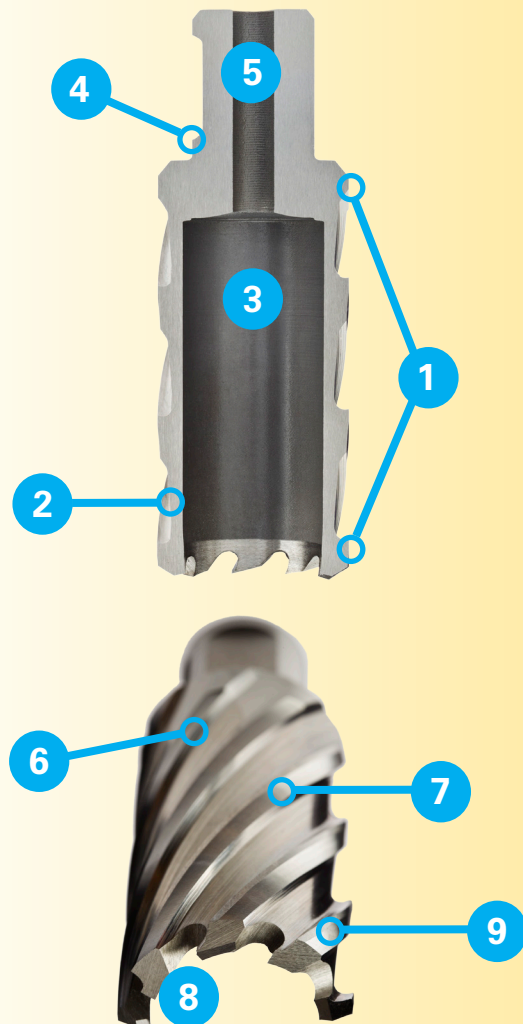
- Manufactured from certified M2 steel
- Teeth are part of cutter body and are shaped for optimal cutting efficiency
- Most common type of cutter
- Used in most applications



### TCT - Tungsten Carbide Tipped

- Tungsten carbide teeth precision welded to alloy body
- Reserved for difficult materials such as Hardox or railway tracks

## Cutter Features



- 1** Stage hardening combines maximum hardness at the teeth with superior strength at the cutter body, reducing breakage.
- 2** Wall thickness optimized for best combination of strength and cutting speed.
- 3** Inside wall of cutter is tapered for assist with active slug ejection.
- 4** Precise shank filament for maximum interchangeability and close tolerance drilling without run-out.
- 5** Precise pilot pin fitment for perfect centration, hassle-free pin retraction and controlled coolant flow.
- 6** Spiral flute angles optimized for chip removal.
- 7** Specially designed blades for optimum stability and heat reduction.
- 8** Alternating cutting teeth angles for precise and clear cuts, resulting in a smooth, burr-free finish.
- 9** Number of flutes and teeth matched to cutter diameter for best tooth load and superior cutting speeds.

## Pilot Pin Selection

### Using 2" Extension:

1" Depth Cutters			2" Depth Cutters		
HSS (High Speed Steel)					
Use Pilot Pin	Part #	HSS Annular Cutter Size	Use Pilot Pin	Part #	HSS Annular Cutter Size
P/N 8800542 1/4" x 4 15/16"	1801110	7/16"x1" Depth	P/N 8800543 1/4" x 6 1/8"	1801065	7/16"x2" Depth
	1801108	1/2"x1" Depth		1801064	1/2"x2" Depth
	1801109	9/16"x1" Depth		1801095	9/16"x2" Depth
	1801066	5/8"x1" Depth		1801068	5/8"x2" Depth
	1801091	11/16"x1" Depth		1801075	11/16"x2" Depth
	1801122	3/4"x1" Depth		1801072	3/4"x2" Depth
	1801073	13/16"x1" Depth		1801070	13/16"x2" Depth
	1801126	7/8"x1" Depth		1801120	7/8"x2" Depth
	1801117	15/16"x1" Depth		1801118	15/16"x2" Depth
	1801123	1"x1" Depth		1801121	1"x2" Depth
	1801076	1-1/16"x1" Depth		1801074	1-1/16"x2" Depth
	1801069	1-1/8"x1" Depth		1801067	1-1/8"x2" Depth
1801071	1-3/16"x1" Depth	1801119	1-3/16"x2" Depth		
TCT (Tungsten Carbide Teeth)					
N/A	1801103	7/16"x1" Depth	P/N 8800543 1/4" x 6 1/8"	1801084	7/16"x2" Depth
	1801099	1/2"x1" Depth		1801081	1/2"x2" Depth
	1801104	9/16"x1" Depth		1801085	9/16"x2" Depth
	1801102	5/8"x1" Depth		1801083	5/8"x2" Depth
	1801100	11/16"x1" Depth		1801082	11/16"x2" Depth
	1801101	3/4"x1" Depth		1801124	3/4"x2" Depth
	1801112	13/16"x1" Depth		1801092	13/16"x2" Depth
	1801114	7/8"x1" Depth		1801094	7/8"x2" Depth
	1801113	15/16"x1" Depth		1801093	15/16"x2" Depth
	1801056	1"x1" Depth		1801052	1"x2" Depth
	1801058	1-1/16"x1" Depth		1801053	1-1/16"x2" Depth
	1801059	1-1/8"x1" Depth		1801054	1-1/8"x2" Depth
	1801060	1-3/16"x1" Depth		1801055	1-3/16"x2" Depth

### Without Extension:

1" Depth Cutters			2" Depth Cutters		
HSS (High Speed Steel)					
Use Pilot Pin	Part #	HSS Annular Cutter Size	Use Pilot Pin	Part #	HSS Annular Cutter Size
P/N 8800607 1/4" x 3"	1801110	7/16"x1" Depth	P/N 8800608 1/4" x 4"	1801065	7/16"x2" Depth
	1801108	1/2"x1" Depth		1801064	1/2"x2" Depth
	1801109	9/16"x1" Depth		1801095	9/16"x2" Depth
	1801066	5/8"x1" Depth		1801068	5/8"x2" Depth
	1801091	11/16"x1" Depth		1801075	11/16"x2" Depth
	1801122	3/4"x1" Depth		1801072	3/4"x2" Depth
	1801073	13/16"x1" Depth		1801070	13/16"x2" Depth
	1801126	7/8"x1" Depth		1801120	7/8"x2" Depth
	1801117	15/16"x1" Depth		1801118	15/16"x2" Depth
	1801123	1"x1" Depth		1801121	1"x2" Depth
	1801076	1-1/16"x1" Depth		1801074	1-1/16"x2" Depth
	1801069	1-1/8"x1" Depth		1801067	1-1/8"x2" Depth
	1801071	1-3/16"x1" Depth		1801119	1-3/16"x2" Depth
TCT (Tungsten Carbide Teeth)					
P/N 8800609 1/4" x 3 7/16"	1801103	7/16"x1" Depth	P/N 8800608 1/4" x 4"	1801084	7/16"x2" Depth
	1801099	1/2"x1" Depth		1801081	1/2"x2" Depth
	1801104	9/16"x1" Depth		1801085	9/16"x2" Depth
	1801102	5/8"x1" Depth		1801083	5/8"x2" Depth
	1801100	11/16"x1" Depth		1801082	11/16"x2" Depth
P/N 8800810 5/16" x 3 9/16"	1801101	3/4"x1" Depth	P/N 8800811 5/16" x 4 13/16"	1801124	3/4"x2" Depth
	1801112	13/16"x1" Depth		1801092	13/16"x2" Depth
	1801114	7/8"x1" Depth		1801094	7/8"x2" Depth
	1801113	15/16"x1" Depth		1801093	15/16"x2" Depth
	1801056	1"x1" Depth		1801052	1"x2" Depth
	1801058	1-1/16"x1" Depth		1801053	1-1/16"x2" Depth
	1801059	1-1/8"x1" Depth		1801054	1-1/8"x2" Depth
	1801060	1-3/16"x1" Depth		1801055	1-3/16"x2" Depth

## Twist Drill Bit Kit Selection

Needed to Drill Hole 1/2 or Smaller with Twist Bits		
If you have:		You'll need:
Chuck with 3/4" Weldon	Nothing else	
Chuck with 1/2" -20 Thread	P/N 8800544 Adaptor 3/4" Weldon - 1/2"-20 thread	
3/4" Weldon- Adaptor	P/N 8800545 Keyless Drill Chuck - 13mm 1/2"-20 thread	
NOTHING	BOTH	P/N 88005545 Keyless Drill Chuck - 13mm 1/2"-20 thread
		P/N 8800544 Adaptor 3/4" Weldon - 1/2"-20 thread
Part #	Description	
8800544	Adaptor 3/4" Weldon - 1/2"-20 thread	
8800545	Keyless Drill Chuck - 13mm 1/2"-20 thread	





# Shipbuilding & Heavy Fabrication

## Introduction

### Table of Contents Shipbuilding & Heavy Fabrication

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## Safer

Magswitch is committed to the notion that your team member should not be touching and handling steel. Let Magswitch tools do that.

## Faster

Magswitch designs tools that improve productivity, resulting in lower Cost to Complete (CTC) and shortens Days to Deliver (DTD).

## Stronger

We'll save you time and materials. Magnetic tools so strong, so controllable, you can save time, effort and material.

***A major shipyard customer said: "Using Magswitch tools helps us save over 20 hours every week of unproductive fitting and grinding just on one substructure!"***



***Come join the fast growing list of over 40 major shipbuilders who are using Magswitch!***



## Heavy Lifters



Scalable technology – customized to meet your needs.



Stronger lifter, complete frame for hoist or forklift.

### Lighter, Safer, Stronger Lifters!

- At least 50% lighter than old technology lifters
- Easier to actuate and more convenient than hooks and slings
- Stronger on thin material (less than 1 in thick)
- Dual hook: Stability control
- Lift from horizontal to vertical
- Lock on/Lock off handle
- Replaceable pole shoes
- Better hold on uneven, dirty steel or round shapes



Use the single hook to lift in shear.



Scan link or go to <http://bit.ly/1v5iVfF>

## Sheet Handler Tool



Incredible time saving.

- Remove high/low when aligning plate
- 100 times faster than using dogs and wedges
- Center Sheet Handler over the seam, turn Magswitch on, press to align and tack.



	Sheet Handler
Part #	8100361
Magnet Strength =	1800 lbs (818 kg)
Height =	54.4 in (1381.0 mm)
Width =	9.3 in (237.0 mm)
Length =	24.5 in (622.0 mm)
Weight =	21.2 lbs (9.6 kg)

*No more pounding, breaking, grinding or clamping to level steel.  
Just turn the magnet on and pull the lever to align.*

## Adjustable Beam Jack Tools

**Magswitch Technology delivers tools that reduce Cost to Complete & Days to Deliver.**

*Our Beam Jack Tools are just one of the many solutions we offer at Magswitch to "Change the way things are done."*



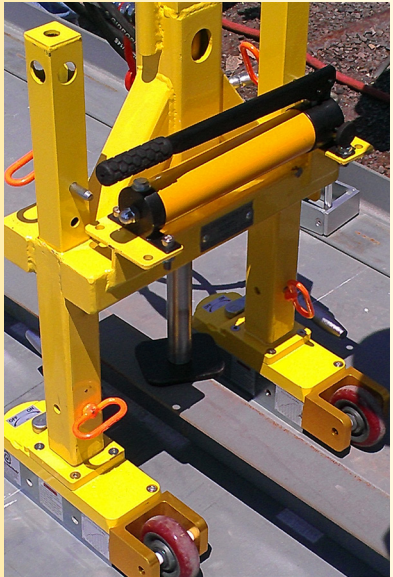
3 TON  
Part# 8800605

Includes: Two MLAY 1000x3



6 TON  
Part# 8800478

Includes: Two MLAY 1000x6

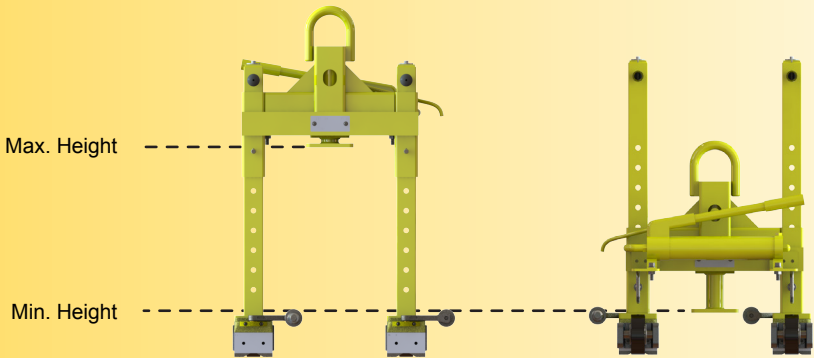


### Features and Benefits

- Must-have for barge and boat-builders
- Shallow-field magnets offer exceptional grip on thin steel
- Cuts fabrication time in half
- Powerful patented technology
- Handle on the top to move unit under crane
- Handles and wheels allow for easy movement along stiffener
- Straight handles allow for easy rotation and movement – similar to a wheelbarrow
- Wide variety of stiffener heights due to longer ram stroke

	3 Ton	6 Ton
Part #	8800605	8800478
Overall Height =	32.0 in (812.0 mm)	34.9 in (886.4 mm)
Width =	21.0 in (530.0 mm)	21.5 in (546.4 mm)
Length =	21.1 in (535.3 mm)	38.4 in (976.0 mm)
Weight =	85.1 lbs (38.6 kg)	182.4 lbs (82.9 kg)
Max. Beam Height =	21.0 in (533.3 mm)	22.5 in (572.4 mm)
Min. Beam Height =	2.1 in (53.25 mm)	2.0 in (50.8 mm)

### Stiffener Beam Height



Scan link or go to <http://bit.ly/2bBwoJ4>



Beam Press Accessory



Requires: MLAY1000x4 or MLAY1000x6

- Attaches to MLAY 1000x4 or x6 lifting magnet
- Provides pry point for fitting stiffener beams
- Easy-carry handle allows for transportation by one or two people



	Beam Press
Part #	8100553
Height =	13.8 in (349.4 mm)
Width =	7.1 in (179.8 mm)
Length =	10.0 in (255.0 mm)
Weight =	11.6 lbs (5.3 kg)

Heavy Sheet Leveler Accessory

	Heavy Sheet Leveler
Part #	8100540
Height =	9.7 in (247.3 mm)
Width =	8.7 in (219.8 mm)
Length =	20.4 in (518.0 mm)
Weight =	12.5 lbs (5.7 kg)



New tools that solve old issues.



Requires: MLAY1000x3, MLAY1000x4 or MLAY1000x6

- Remove high/low during plate fit-up
- Levels up to 2" thick plate
- Easy-carry handle

Stiffener Alignment Tool Accessory

	Stiffener Alignment
Part #	8100554
Height =	7.9 in (201.0 mm)
Width =	5.9 in (150.0 mm)
Length =	7.4 in (187.0 mm)
Weight =	3.8 lbs (1.7 kg)



Requires: MLAY1000x2

- Mounts onto MLAY 1000x2 lifting magnet
- Provides stop for setting up stiffener beams
- Keeps beams at 90 degrees during fit-up

Also see these tools in this catalog:

90 Degree Angle Tools - See page 11

MagDrill - See page 6

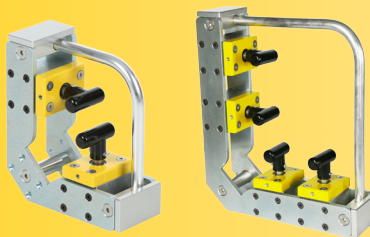
Multi Angle MagVise - See page 8

Hand Lifter 60-CE (Cordless Electric) - See page 10

Heavy Lifting Magnets - See page 23

MagSquares - See page 5

90 Degree Angle Stiffeners



	1200	2400
Part #	8100961	81001000
Magnet		
Strength =	1200.0 lbs (545.5 kg)	2400.0 lbs (454.0 kg)
Height =	8.2 in (208.0 mm)	12.3 in (312.8 mm)
Width =	3.1 in (80.0 mm)	3.1 in (80.0 mm)
Length =	7.2 in (183.0 mm)	10.3 in (262.0 mm)
Weight =	9.9 lbs (4.5 kg)	17.6 lbs (8.0 kg)

Incredible Power & Precision Control!

- Magswitch 90 Degree Angle Stiffeners are some of the most compact, powerful and versatile welding tools in the market
- The angle stiffeners are easy to use and work with larger and heavier steel
- Due to the unique design, the entire side plate is magnetized, therefore they can be used with stiffeners of various sizes
- If you want more strength, just add one more magnet (only available on the 600x2 tool)
- Reinforced end caps for superior durability



8100961

90 Degree 1000

	1000
Part #	8100503
Magnet	
Strength =	1000 lbs (454 kg)
Height =	11.3 in (287.0 mm)
Width =	5.7 in (145.0 mm)
Length =	18.6 in (474.0 mm)
Weight =	21.2 lbs (9.6 kg)



8100503

New 90 Degree Angle 1000 for heavy fabrication work.



MagSquares can be repositioned or reversed on each axis.

- Fixed 90° welding angle
- Incredible power and precision control
- Adjustable - Slide up or down on vertical axis
- Reversible - inside or outside
- Size for any job - big or small
- Use additional MagSquares for increased strength



Scan link or go to <http://bit.ly/2bcBjdD>





3 1-Ton Lifters Lifting 3,267 lb Sheet

# Heavy Lifting

## Introduction

### Table of Contents Heavy Lifters

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MLAY 600 Lifting Magnets . . . . .	29
E50 CE With Remote. . . . .	29
MLAY 1000 Lifting Magnets . . . . .	30
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## Lighter

Magswitch lifters offer substantial advantages in strength, size, and control over old technology. Magswitch lifters are 50% lighter or more in many cases. This translates to easier setup of a lift and overall safer lifting. When considering the convenience of a Magswitch lifter over hooks and slings, it's easy to see how much our technology can improve efficiency in handling steel.

## Safer

Safety is paramount when using magnetic lifters, which is why safety is our priority. Knowing the true limits of lifters is crucial to lifting safety, especially thin material (1" or less). Our lifters are stronger on thin materials and are easier to actuate, which improve the overall safety and efficiency of metal handling applications.

## Stronger

Permanent magnets are now employed to lift heavy steel where only hooks or straps were previously trusted. The advancements employed by Magswitch Technology take magnetic lifting capabilities to a whole new level of safety and strength.



MLAY 600x4 Lifting 550 lbs. of Steel

Heavy Lifting



Technology and Feature Advantages



Unlike older technologies, Magswitch lifters exert full hold force on thinner steel.

» The majority of steel lifted is less than 1 inch thick.

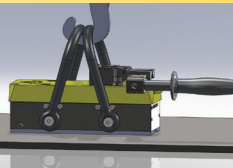
Better hold on uneven, dirty steel or round shapes.

» Magswitch lifters feature a more concentrated flux, resulting in a safer hold when lifting these types of materials.

Magswitch Lifters are easier to turn on.

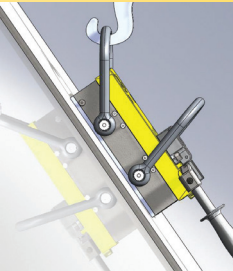
» Especially beneficial in larger lifters, where older technology makes working with thin steel (1 inch or less) very difficult and dangerous.

Easier to activate on thin material than old technology lifters.



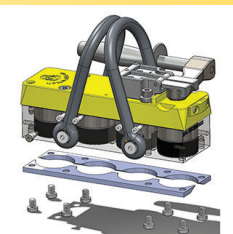
Dual hook: Stability control (Patent-pending: App #61/665,611 USA).

» Use both hooks for safer lifts; the force of the lift stabilizes the magnet and reduces dangerous swings in the load



Single hook: lift from horizontal to vertical.

» Use one swivel hook when lifting from flat to vertical



Lock on/Lock off handle

» Meets or exceeds all domestic and international lifting standards

Replaceable pole shoes

» Periodically replace the pole shoes to maintain safety and extend the life of the lifter

Selecting the Right Magswitch Lifter

Magswitch Delivers safety:

Choosing the right lifter is very important for safer lifting.

Always Play It Safe. Saving a few dollars on a magnetic lifter is not worth the risk. Lift ratings vary dramatically due to a number of variables. ALWAYS select lifters based on what you are lifting.

Look at the Max. Safe Working Load capabilities of each magnet on the chart below and note the magnets that qualify for the job. The Max. Safe Working Load changes with material thickness as well as other important factors. Please consult your Magswitch dealer for recommendations specific to your application.

Reduction Factors for Materials (Other than AISI 1020 Steel)	
Material	Reduction Factor
1080 Steel	100%
Cast Steel	90%
3% Silicon Steel	80%
AISI 1095 Steel	70%
416 Stainless Steel	50%
High Carbon Steel	50%
Cast Iron Non-Chilled	45%
Pure Nickel	10%

» FLIP TO PAGE 52 TO FILL OUT A CHECKLIST FOR SELECTING THE RIGHT MAGSWITCH LIFTER.

Part #		Lifting Magnet Description	Max 3:1 Safe Working Load	3:1 SWL on 1/4"	3:1 SWL on 1/2"	3:1 SWL on 3/4"	3:1 SWL on 1"	3:1 SWL on 2"
Shallow Field	8100089	MLAY 600 (200 lbs)	200 lbs	170 lbs	200 lbs	200 lbs	200 lbs	200 lbs
	8100360	MLAY 600x2 (360 lbs)	367 lbs	240 lbs	367 lbs	367 lbs	367 lbs	367 lbs
	8100364	MLAY 600x4 (760 lbs)	762 lbs	427 lbs	762 lbs	762 lbs	762 lbs	762 lbs
	8100387	E50 CE w/ Remote (570 lbs)	571 lbs	342 lbs	571 lbs	571 lbs	571 lbs	571 lbs
Deep Field	8100088	MLAY 1000 (330 lbs)	333 lbs	205 lbs	217 lbs	277 lbs	333 lbs	333 lbs
	8100484	MLAY 1000x2 (1/4 Ton)	667 lbs	360 lbs	433 lbs	555 lbs	667 lbs	667 lbs
	8100403	MLAY 1000x3 (1/2 Ton)	911 lbs	446 lbs	650 lbs	832 lbs	911 lbs	911 lbs
	8100418	MLAY 1000x4 (3/4 Ton)	1,300 lbs	840 lbs	866 lbs	1,074 lbs	1,300 lbs	1,300 lbs
	8100482	MLAY 1000x6 (1 Ton)	2,148 lbs	783 lbs	1,202 lbs	1,511 lbs	2,148 lbs	2,148 lbs
	8100549	MLAY 1000x12 (2 Ton)	3,800 lbs	1,331 lbs	1,725 lbs	2,570 lbs	3,500 lbs	3,800 lbs

COMPARE HEAVY LIFTERS

MAGSWITCH TECHNOLOGY

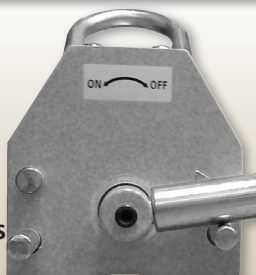
- ✓ Stability
- ✓ Lift to Shear
- ✓ Replaceable Pole Shoe
- Stronger Hold on Thinner Steel



Weight: 58 Lbs

OLD TECHNOLOGY

- Stability
- Lift to Shear
- Replaceable Pole Shoe

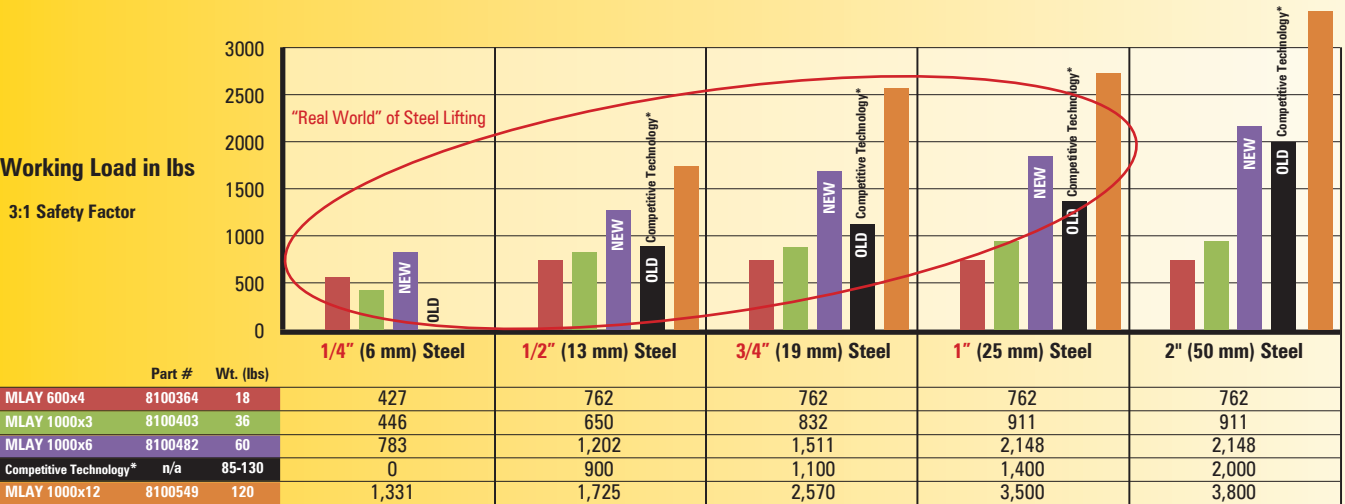


Weight: 85-130 Lbs

783 LBS	N/A	1/4"
1,298 LBS	900 LBS	1/2"
1,872 LBS	1,400 LBS	1"
2,148 LBS	2,000 LBS	2"
All ratings per ASME 3:1 Safe Working Load		

Safe Working Load in lbs

3:1 Safety Factor



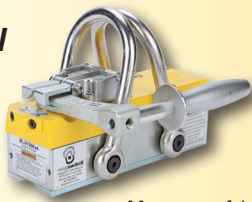
\* 1 Ton Rated Lifter

Chart values represent data collected using SAE 1020 steel only. Please consult your distributor for information regarding de-rating factors for other materials. No information contained herein may take precedence over ASME B30.20 standard. Many factors contribute to actual breakaway force in each application. Always test the Magswitch in each application before deployment.



Heavy Lifting Magnets		MLAY 600 200 lbs	MLAY 600x2 360 lbs	MLAY 600x4 760 lbs	E-50 CE w/ Remote 570 lbs
<b>Part #</b>		8100089	8100360	8100364	8100387
<b>Max. SWL 3:1 lift capacity</b>		200.0 lbs (90.0 kg)	367.0 lbs (166.0 kg)	762.0 lbs (346.0 kg)	571.0 lbs (259.0 kg)
<b>Minimum de-stack thickness</b>		Shallow 0.5 in (12.7 mm)	Shallow 0.5 in (12.7 mm)	Shallow 0.5 in (12.7 mm)	Shallow 0.5 in (12.7 mm)
<b>Height =</b>		7.2 in (184.0 mm)	6.7 in (170.4 mm)	6.6 in (166.5 mm)	12.7 in (322.0 mm)
<b>Width =</b>		2.0 in (51.5 mm)	6.5 in (165.4 mm)	6.5 in (165.4 mm)	4.1 in (103.0 mm)
<b>Length =</b>		4.2 in (106.0 mm)	8.7 in (220.9 mm)	9.3 in (235.9 mm)	9.3 in (236.0 mm)
<b>Weight =</b>		4.4 lbs (2.0 kg)	9.5 lbs (4.3 kg)	17.9 lbs (8.1 kg)	19.4 lbs (8.8 kg)

1/4 TON  
Part# 8100364



Most powerful shallow-field tool (517 lbs on only 1/4 inch).



Part# 8100089

Lightweight, small profile and strong lift.



Part# 8100360

Ideal for small to medium lifting.

The Magswitch MLAY600 series magnets are perfect for small materials and light to medium lifting. These lifters are lightweight, have a small profile and feature our full swivel hook for lifting from the top or the side. Each features a locking handle to ensure release of load is only intentional. Manual ON/OFF operation.

With full field saturation, hold force at 0.5 in (12.7mm), these lifters are ideal for thinner steel, but hold thick steel just as well.

The MLAY600x4 is lightweight yet very strong. This lifter features our patent-pending dual hook for load stability, and single hook for lifting horizontal to vertical. With full field saturation, hold force at 0.5 in (12.7mm), this lifter is ideal for thinner steel, but will hold thick steel just as well.

Custom designed pole shoes are available for MLAY600x2 and MLAY600x4.



Scan link or go to <http://bit.ly/1v5iVfF>



Part# 8100387

- World's first cordless electric heavy lifter!
- Includes two 12-volt rechargeable Lithium-ion batteries and a charger, so you always have a spare charged battery on hand.
- Battery offers up to 750 actuations per charge.
- Lifts flat, steel and pipe.
- Manual ON/OFF override feature, if battery loses charge.
- Compact – fits in narrow beams.



8100364

Use the single hook to lift horizontal to vertical.



8100387

Heavy Lifting Magnets		MLAY 1000 330 lbs	MLAY 1000x2 1/4 Ton	MLAY 1000x3 1/2 Ton
<b>Part #</b>		8100088*	8100484*	8100403
<b>Max. SWL 3:1 lift capacity</b>		333.0 lbs (151.0 kg)	667.0 lbs (302.0 kg)	911.0 lbs (414.0 kg)
<b>Minimum de-stack thickness</b>		Deep 0.8 in (19.1 mm)	Deep 0.8 in (19.1 mm)	Deep 0.8 in (19.1 mm)
<b>Height =</b>		10.0 in (253.1 mm)	10.6 in (269.5 mm)	10.4 in (264.5 mm)
<b>Width =</b>		2.8 in (72.1 mm)	7.7 in (195.6 mm)	7.7 in (195.4 mm)
<b>Length =</b>		5.8 in (147.1 mm)	9.9 in (250.5 mm)	10.7 in (271.3 mm)
<b>Weight =</b>		11.5 lbs (5.2 kg)	23.8 lbs (10.8 kg)	36.5 lbs (16.6 kg)

\*Features single hook for lifting

		MLAY 1000x4 3/4 Ton	MLAY 1000x6 1 Ton	MLAY 1000x12 2 Ton
<b>Part #</b>		8100418	8100482	8100549
<b>Max. SWL 3:1 lift capacity</b>		1300.0 lbs (591.0 kg)	2148.0 lbs (974.3 kg)	3800.0 lbs (1723.7 kg)
<b>Minimum de-stack thickness</b>		Deep 0.8 in (19.1 mm)	Deep 1.0 in (25.4 mm)	Deep 1.3 in (31.8 mm)
<b>Height =</b>		9.9 in (250.8 mm)	9.5 in (242.5 mm)	11.9 in (301.8 mm)
<b>Width =</b>		7.7 in (195.4 mm)	7.7 in (195.4 mm)	12.1 in (306.8 mm)
<b>Length =</b>		13.8 in (350.3 mm)	20.1 in (510.3 mm)	19.5 in (496.0 mm)
<b>Weight =</b>		45.2 lbs (20.5 kg)	60.3 lbs (27.4 kg)	120.0 lbs (55.0 kg)

For heavy lifting, the MLAY1000 series lifters attain full hold on approximately 1.0in (25.4mm) thick steel. These lifters feature our full swivel hook for lifting from the top or the side. Each lifter is manually activated and features a safety lock in both on and off position.

The MLAY1000 series features a replaceable pole shoe, ideal for customizing to fit your application. With full field saturation (hold force) at 1.0in (25.4mm), this lifter is ideal for porous material and thick steel. The MLAY1000x2,3,4,6 all have replaceable pole shoes.

These lifters are lightweight and easy to turn on compared to old technology lifters, which are difficult to activate on thin steel. For example, the MLAY1000 series can easily be activated on 0.5in (12.7mm) thick steel. This means that Magswitch enables you to use powerful lifters on thinner steel. These lifters feature our patented dual hook for load stability, and single hook for lift between horizontal to vertical. With full field saturation, hold force at 1.0in (25.4mm), these lifters are ideal for porous material and thick steel.



8100484



8100418



8100403

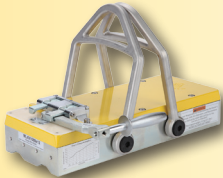
Safety: Patent-pending dual hook for added load stability.



1/2 TON  
Part# 8100403



1 TON  
Part# 8100482



2 TON  
Part# 8100549



Scan link or go to <http://bit.ly/2cf20HY>



# Magswitch Heavy Lift Frame Series

NEW!

Another revolutionary innovation from Magswitch!

If you lift pipe, I-beams or heavy sheet steel, this is a tool you need in your shop! Magswitch Technology is “Changing the way things are done” once again by introducing the innovative new Heavy Lift Frame Series. This **game-changing** tool utilizes patented shallow-field technology to lift a single sheet from a stack of material. Enhanced workplace safety is achieved through fail-safe operation. Increased **strength**, **efficiency** and **durability** make tough jobs easy. By providing unique magnetic solutions for new standards of **productivity**, one man can easily do the work of two.

## Features and Benefits

### Proudly designed, tested and manufactured in the USA

- Patented and powerful shallow-field technology
- Single sheet de-stack capability
- Revolutionary in steel lifting / handling
- Scalable technology – customized to meet your needs
- Add additional magnets based on needs
- Cordless electric (CE) actuation with remote control allows for easy ON/OFF capability - available on most heavy lift frames
- Onboard battery creates a more compact tool
- Enhanced workplace safety is achieved through fail-safe operation
- Dual Purpose – under hook or forklift

Bottom Line Benefits

- Increased productivity / safety / significant cost savings



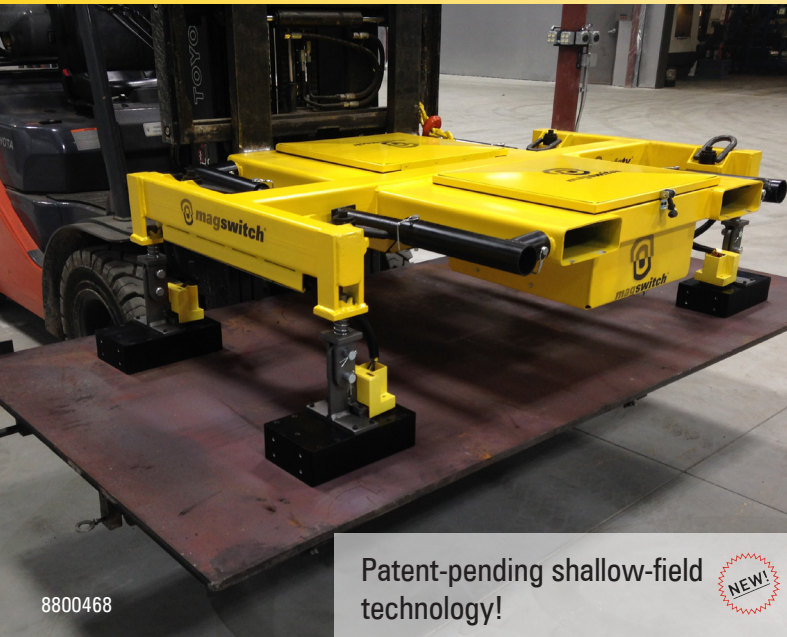
Scan link or go to <http://bit.ly/2c4NU5c>

“I never trusted single sheet lifters until I was introduced to Magswitch.”



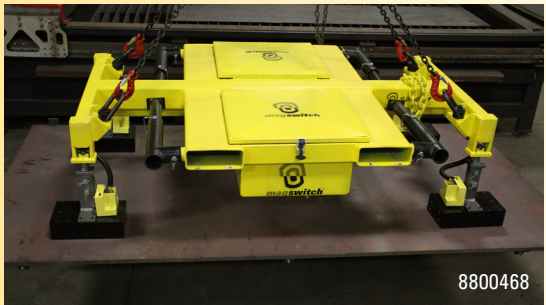
\*Chains sold separately

	HLF-8000-M 2 Tool 2 Ton Lifter	HLF-8000-M 3 Tool 3 Ton Lifter	HLF-8000-M 4 Tool 4 Ton Lifter	HLF-3000-CE 5 Tool 1 1/2 Ton Lifter
Part #	8800431	8800432	8800596	8800468
Max. SWL 3:1 lift capacity	4000.0 lbs (1818.0 kg)	6000.0 lbs (2727.0 kg)	8000.0 lbs (3629.7 kg)	3000.0 lbs (1364.0 kg)
Length =	116.0 in (2946.4 mm)	116.0 in (2946.4 mm)	116.0 in (2946.4 mm)	72.0 in (1829.0 mm)
Width =	30.5 in (774.7 mm)	30.5 in (774.7 mm)	30.5 in (774.7 mm)	48.0 in (1219.0 mm)
Height =	22.5 in (571.5 mm)	22.5 in (571.5 mm)	22.5 in (571.5 mm)	19.0 in (483.0 mm)
Weight =	400.0 lbs (181.4 kg)	460.0 lbs (208.7 kg)	520.0 lbs (235.9 kg)	450.0 lbs (204.1 kg)
Cordless Electric Operation (CE)    Manual (M)				



Patent-pending shallow-field technology! 

NEW!



\*Chains sold separately





# Woodworking

# Prevent Accidents Before They Happen!



## Safer

Avoid saw-related accidents before they happen. Reduce kickback and keep your fingers out of harms way.

## Faster Setup

A simple half-turn locks the tool into place with unprecedented holding power. Never again will you be limited to mitre slots or tracks.

## Precise

Easy and precise positioning. Better control of your work piece allows for a higher quality cut.

## Invaluable Tools For Any Woodworker

Utilizing patented magnetic technology, Magswitch has created a series of powerful award-winning tools designed to make your woodworking projects faster, easier and safer. The Magswitch Workholding System replaces fences, jigs and other devices, and our system works on a variety of machines. These tools increase safety by keeping fingers away from the table while improving the quality of cuts. With fast and precise setup anywhere on the table, the tools are ideal for anyone working with wood.

See Demo on Workholding System.



Scan link or go to <http://youtu.be/N13HkxyRsZc>

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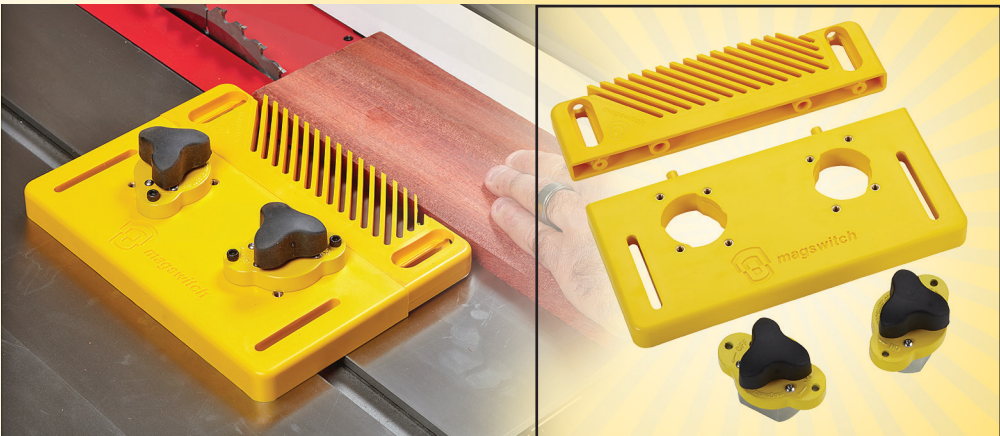
# The Magswitch Workholding System

All your tabletop workholding needs in one complete system.

A workholding system built around Magswitch ON/OFF magnetic clamps provides strong, precise placement anywhere on any steel table. Our award-winning technology is a breakthrough for accomodating your workholding needs on all your power tool tables including table saws, joiners, planers, band saws and shapers.



## Starter Kit and Accessories

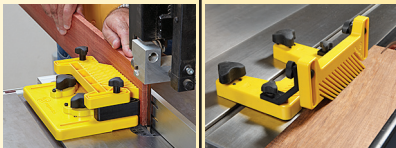


### Starter Kit Part# 8110134

It all starts here.

Add attachments for more versatility. Kit contains:  
Two 150 lb grip MagJigs,  
a Universal Base and a  
Reversible Featherboard  
Attachment.

- » Fast easy set up
- » Precise tensioning
- » Place anywhere on table



### Vertical Featherboard Attachment

- » Safety award winner. Mitigate kickback.
- » Absolute must-buy with Starter Kit.
- » Dual plane workholding.
- » Stack horizontally for tall panels.

Part# 8110178



### Resaw Guide Attachment

- » Adjustable roller bearing for glide.
- » Angled in-feed/out-feed for blade drift.
- » Micro adjust to exact 90°.
- » Use on band saw or out-feed on table saw.

Part# 8110125



### Dual Roller Attachment

- » Ideal for tall panel feed.
- » Glide rollers - yet strong firm hold.
- » Adjustable roller bearings.
- » Great for hold on out-feed as well.

Part# 8110130



### Thin Stock Hold Down Attachment

- » Three tools in one.
- » Thin stock hold near blade.
- » Clean cuts with strong hold near blade.
- » Cut thin strips with roller guide.

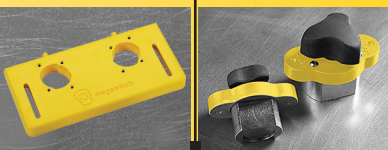
Part# 8110362\*



### 18in & 36in Universal Track Attachment

- » Instant wall anywhere you need it.
- » Accepts standard hardware.
- » Accepts all standard T-bolts, 1/4 in. hex, 5/16 in hex and Kreg® clamps.

18 in Universal Track Wall (Part# 8110132)\*  
36 in Universal Track Wall (Part# 8110370)\*



### Add Extra Bases or MagJigs

- » Use the MagJigs in your own fixtures.

Mounting Base (Part# 8110112)\*  
Riser Kit (4) - for Vertical Attachment (Part# 8110155)\*

Part #	Description
8110015	Universal Featherboard (two 95 lb grip magnets)
8110328	Pro Table Featherboard (two 150 lb grip magnets)
8110329	Pro Fence Featherboard (two 150 lb grip magnets)
8110131	Reversible Featherboard

## Individual Featherboards

Delivering the benefits of Magswitch technology, the Universal, Pro Table and Pro Fence Featherboards are available to meet your specific needs. The Pro Table Featherboard accommodates the Vertical Featherboard Attachment (Part #8110178).

## Individual Featherboards



Universal

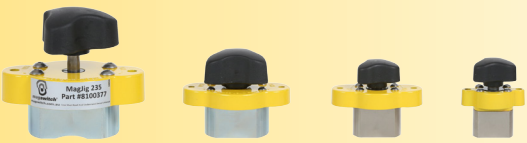
Pro Table

Pro Fence

Part #	Description
8100818	MagJig 60
8110004	MagJig 95
8110005	MagJig 150
8100377	MagJig 235



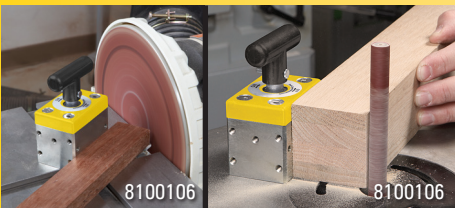
## MagJigs



### ON/OFF Magnetic Clamp

Magswitch MagJigs are the unprecedented and ultimate workholding clamp. Incredible hold force is activated with a simple 180° turn! Unmatched speed, strength and precision have revolutionized table-top workholding. Simply drill holes into your 3/4 in boards and use as many MagJigs as you like, depending on the hold force you require. Use anywhere on a steel table and move from fixture to fixture.

Part #	Description
8100494	MagSquare 165
8100238	MagSquare 400
8100106	MagSquare 600
8100099	MagSquare 1000



## MagSquares



### ON/OFF Magnetic Squares

Magswitch MagSqaures are the most versatile workholding tools ever. A half turn is the only action required to turn them on and off, making them superior to manual clamping. Use as a guide anywhere on a steel or cast iron table. No limitations like clamps

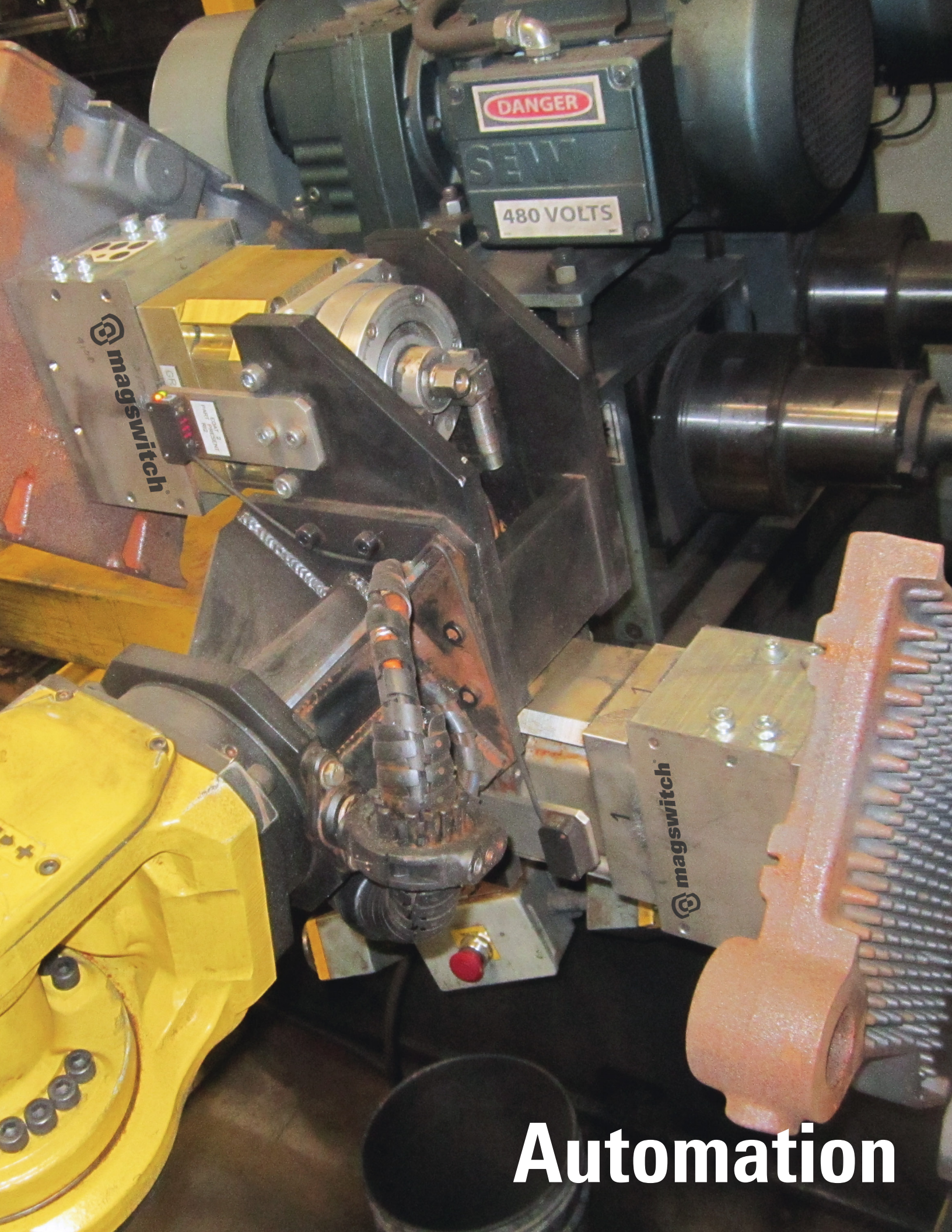
Part #	Description
180098	30mm Forstner Bit (for MagJig 95)
180099	40mm Forstner Bit (for MagJig 150)
8110155	Risers (for Vertical Attachment)
8110043	25 lb Automatic-On Cabinet Latch 8-325
8110007	12 lb Magnetic Cabinet Latch 8-32
8110082	12 lb Magnetic Cabinet Latch M4

Drill holes in 3/4" thick material to create custom jigs (see MagJigs above for custom application). Forstner bits available for MagJig 95 & 150. Magnetic cabinet latches are great for boats, RV's and trailers. Available in both manual and auto-on.

## Accessories & Add-ons







## Speed

Bringing the power & versatility of Magswitch Technology to the automation world.

## Efficiency

Significant new capabilities and improvements in material handling applications.

## Energy Savings

Replace costly vacuum cups, heavy grippers and problematic pin clamps.



The unmatched control and scalability of ON/OFF permanent magnets, combined with our patented new switching technique allows manufacturers, integrators and engineers to find clever new solutions each day. This more efficient technology generates millions in cost savings.

Magswitch MIS tools bring the power and versatility of the Magswitch Technology to the automation world, offering significant new capabilities and tremendous improvements to end of arm tooling, pick-and-place, lifting and many other applications. The powerful and lightweight tools in the integrated solutions line make it possible to implement magnets where they weren't previously applied. One application greatly benefiting from the use of magnetic technology is end of arm gripping and handling. Magswitch can replace costly vacuum cups and traditional pin clamps, which over time present expensive energy efficiency and breakage problems.

Companies such as Volkswagen, Audi, Comau, Gestamp, Chrysler, Ford, Bobcat and Caterpillar are now using Magswitch pneumatic tools in their plants. Six additional automotive companies are in the process of establishing Magswitch for integration. If you handle or fabricate steel using automation, you will find solutions and savings with Magswitch that you never knew were possible.

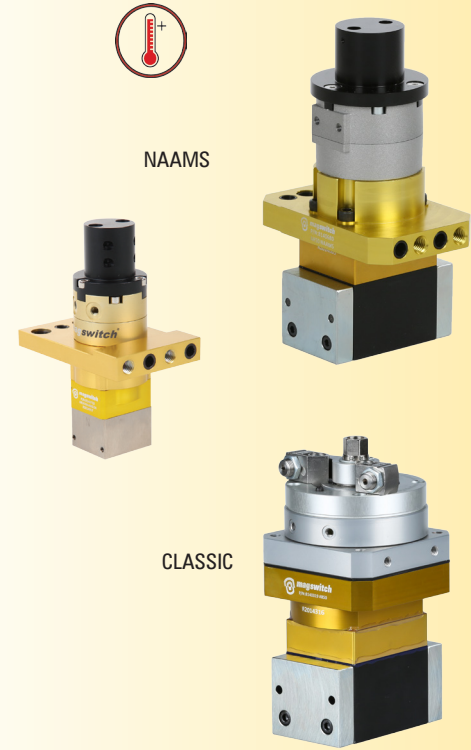
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# Automation



AR-Series



Part # NAAMS	NAAMS High Heat	Part # Classic	Description	Max Breakaway on Flat @ Thickness	Unit Weight
8140678*	8140718*	8140481*	AR20	63.2 lbs (28.7 kg) @ 11.0 ga (3.0 mm)	0.9 lbs (0.4 kg)
8140679*	8140719*	8140480*	AR30	386.8 lbs (175.4 kg) @ 10.0 ga (3.5 mm)	1.5 lbs (0.7 kg)
8140715*	8140720*	N/A	AR40	381.2 lbs (172.9 kg) @ 0.4 in (9.5 mm)	3.7 lbs (1.9 kg)
8140680*	8140721*	8140319	AR50	548.0 lbs (248.6 kg) @ 0.4 in (9.5 mm)	6.1 lbs (2.8 kg)
8140681*	8140722*	8140320	AR70	976.0 lbs (442.7 kg) @ 0.5 in (12.7 mm)	14.9 lbs (6.8 kg)
N/A	N/A	8140740	AR110	3,133.2 lbs (1,421.0 kg) @ 1.5 in (38.1 mm)	62.5 lbs (28.4 kg)

\*Accepts 8.0 mm face shielded inductive proximity

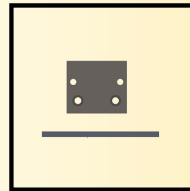
Actual working loads may be significantly lower. We strongly recommend consulting with the Magswitch technical engineering team for your specific application.

- Compact single magnet design
- Fast MTTR with NAAMS mounting
- Customizable contact surface
- Maximum power to weight ratio
- Saves energy - 90% less Air
- Fail-safe operation

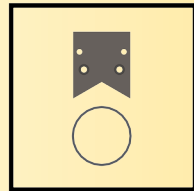


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FOR USE ON:



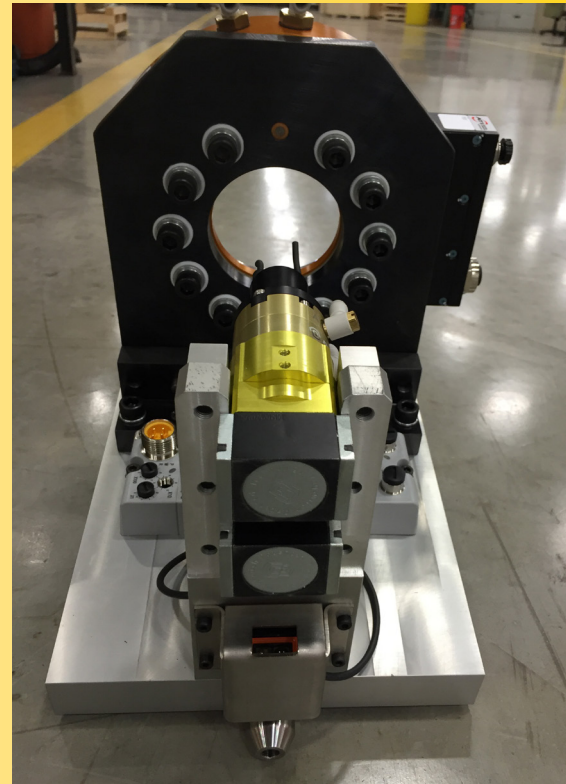
FLAT



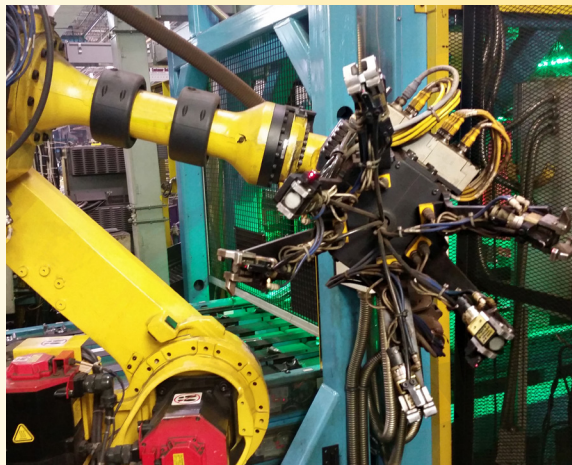
ROUND



IRREGULAR



Application:	Simultaneous pick and place of stamped components with vision
Replacement for:	Power clamps, parallel grippers, suction cups
Transfer Medium:	6-Axis Robot
Challenges:	» Small parts loading into fixture limit clamping possibilities » Part shifting during handling
Magswitch Advantage:	<b>Maintain Position Accuracy</b> » Custom pole shoes match geometry to maintain orientation <b>Reduced Gripper Size</b> » Small form factor allows units to fit into tighter spaces



AY-Series

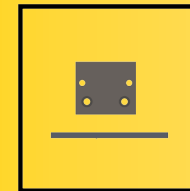
Part #	Description	Max Breakaway on Flat @ Thickness	Unit Weight
8140543	M10AY ASC*	53.2 lbs (24.1 kg) @ 20.0 ga (1.0 mm)	1.0 lbs (0.5 kg)
8140447	M15AY ASC*	160.0 lbs (72.6 kg) @ 12.0 ga (2.7 mm)	1.8 lbs (0.8 kg)
8140591	M20AY ASC**	380.0 lbs (172.4 kg) @ 0.2 in (4.8 mm)	3.2 lbs (1.5 kg)
8140263	M30AY ASC**	524.0 lbs (237.7 kg) @ 10.0 ga (3.4 mm)	6.4 lbs (2.9 kg)

\*Accepts 8.0 mm face shielded inductive proximity

\*\*Accepts SMC D-S7P1 & D-S7P2, or D-S791 & D-S792

Actual working loads may be significantly lower. We strongly recommend consulting with the Magswitch technical engineering team for your specific application.

FOR USE ON:



FLAT

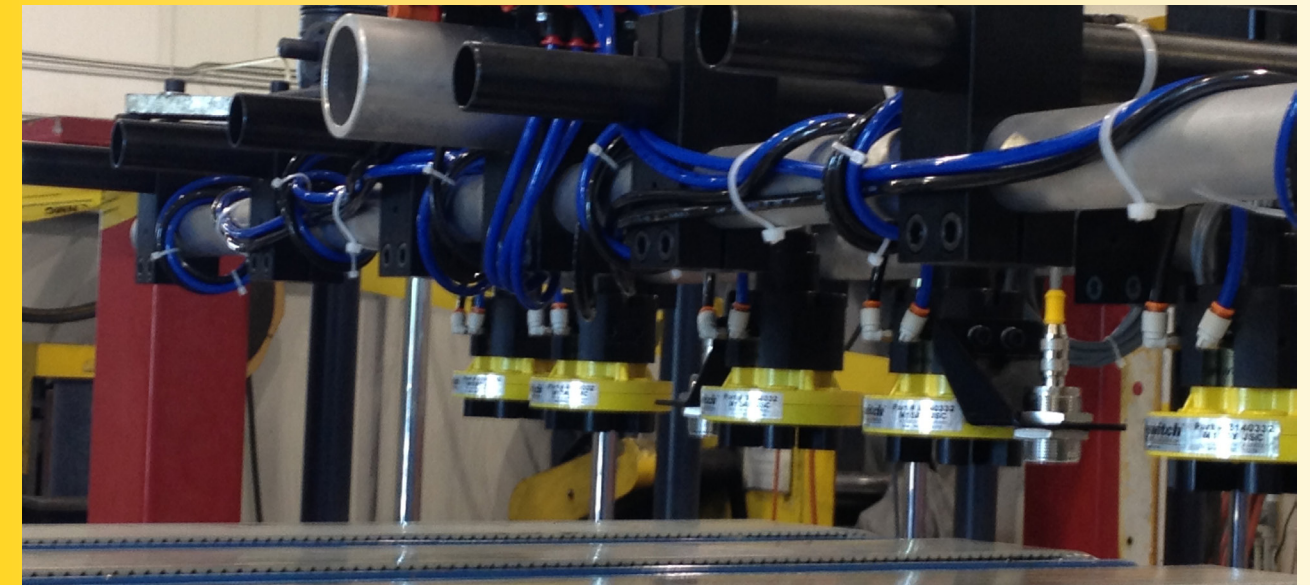


Scan link or go to <http://bit.ly/1Qb0Zil>

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



See page 4 for a description of deep field vs. shallow-field.



Application:	Fast handling of sheet metal blanks
Replacement for:	Suction cups
Transfer Medium:	Palletizing robot, gantry, pick & place units
Challenges:	» Unstable degree of oil (slipping parts during transfer) » Very low cycle times (down to 2 seconds) » High Energy Consumption (permanent vacuum required to ensure fail-safe operation)
Magswitch Advantage:	<b>Eliminate downtime</b> from slipping parts » Performance is independent of degree of oil <b>Improved Cycle Times</b> » Maximum actuation time of 0.3s <b>Energy Efficient</b> » Air consumption reduced by 90%

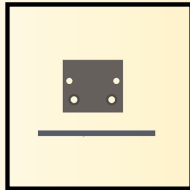


LAY-Series				
Part #	High Heat Part #	Description	Max Breakaway on Flat @ Thickness	Unit Weight
8140575	8140711	PLAY20x4	288.4 lbs (130.8 kg) @ 0.4 in (9.5 mm)	2.6 lbs (1.2 kg)
8140405	8140873	PLAY50x2	1,100.0 lbs (499.0 kg) @ 0.5 in (12.7 mm)	10.6 lbs (4.8 kg)
8140393	8140838	PLAY50x3	1,652.0 lbs (749.3 kg) @ 0.5 in (12.7 mm)	18.3 lbs (8.3 kg)
8140404	8140874	PLAY50x4	2,288.0 lbs (1,037.8 kg) @ 0.5 in (12.7 mm)	30.0 lbs (13.6 kg)
8140391	8140875	PLAY70x2	2,120.0 lbs (961.6 kg) @ 0.8 in (19.1 mm)	26.6 lbs (12.1 kg)
8140544	8140836	PLAY70x3	2,876.0 lbs (1,304.5 kg) @ 0.8 in (19.1 mm)	36.0 lbs (16.3 kg)
8140417	8140876	PLAY70x4	3,900.0 lbs (1,769.0 kg) @ 0.8 in (19.1 mm)	48.0 lbs (23.2 kg)

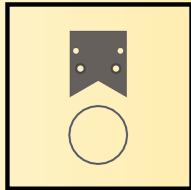
Note: Standard sensor cap accepts SMC D-S7P1 & D-S7P2, or D-S791 & D-S792  
Alternative sensor cap available for 8.0 mm face shielded inductive proximity

Actual working loads may be significantly lower. We strongly recommend consulting with the Magswitch technical engineering team for your specific application.

FOR USE ON:



FLAT



ROUND



IRREGULAR



Scan link or go to <http://youtu.be/WDoLeaYqRfk>

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



Application:	Railway wheelset lathe load/unload
Replacement for:	Mechanical grippers
Transfer Medium:	6-Axis Robot
Challenges:	» Extreme weight (1157kg) » Shear loading » Part security » Gripper weight
Magswitch Advantage:	<b>Improved Safety</b> » No external moving parts <b>Reduced Gripper Weight</b> » Lighter, more compact tools <b>Extreme Performance</b> » High power to weight ratio

Magnetic Sheet Fanner Series			Free-Floating	Pneumatic
Part #	8100871	8140686		
Length =	7.5 in (190.0 mm)	8.5 in (216.0 mm)		
Width =	6.3 in (159.5 mm)	6.5 in (164.0 mm)		
Height =	9.0 in (228.0 mm)	12.8 in (323.5 mm)		
Weight =	14.8 lbs (6.7 kg)	40.0 lbs (18.2 kg)		

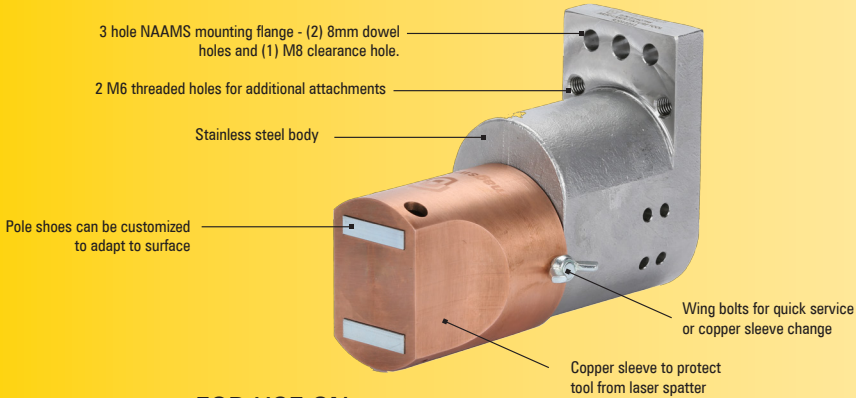
Finally, a safer magnetic sheet fanner to save fingers!

Magswitch Magnetic Sheet Fanner - True ON/OFF technology preventing costly accidents!

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



AR30		Laser Fixture Tool	
Part #	8140788		
Optimal Matl. Thickness	10.0 ga (3.5 mm)		
Length =	4.1 in (105.0 mm)		
Width =	2.5 in (64.0 mm)		
Height =	5.7 in (145.0 mm)		
Weight =	4.8 lbs (2.2 kg)		



FOR USE ON:



FLAT



ROUND



IRREGULAR



The Magswitch AR-Series has been tested in production on laser cutting applications with the following results:

- **Increased process efficiency by reducing non-value added times.**
  - » Magswitch tools clamp inside perimeter of the part allowing for optimized laser path.
  - » Faster manual loading and automatic clamping.
- **Improved repeatability of process and part accuracy.**
  - » No moving parts (clamp arms) during process guarantees static part location improving quality of final product.

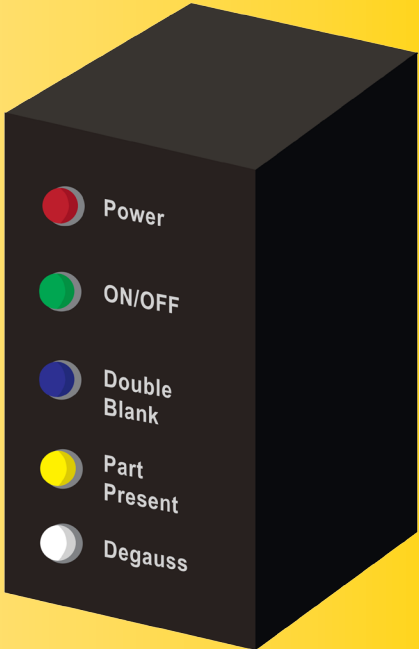
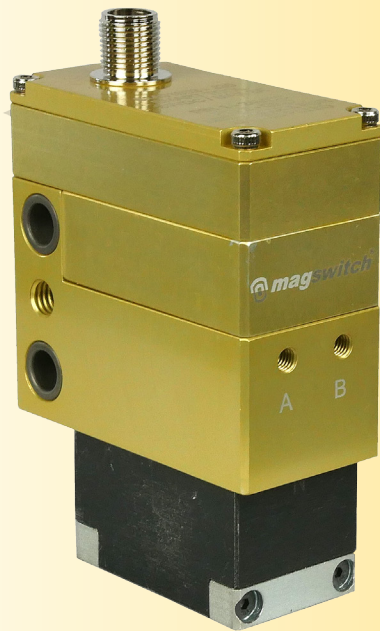


# New Innovations... Coming Soon!

NEW!

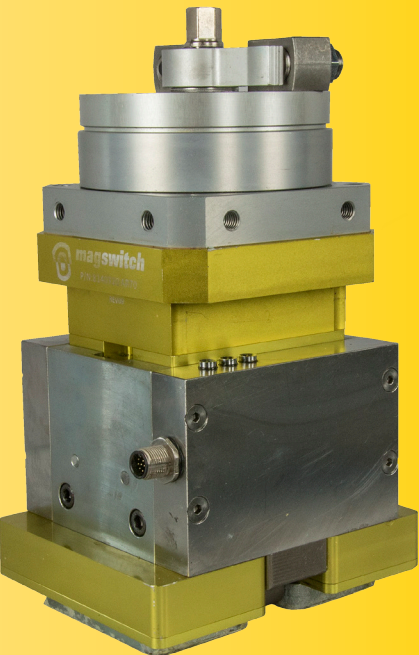
Smart Technology

- Integrated into Tool
- Eliminates Need for Additional Sensors
- Available on J-Series Tools



J-Series

- Integrated Side NAAMS Mounting
- Stronger
- Improved Pole Shoe Design



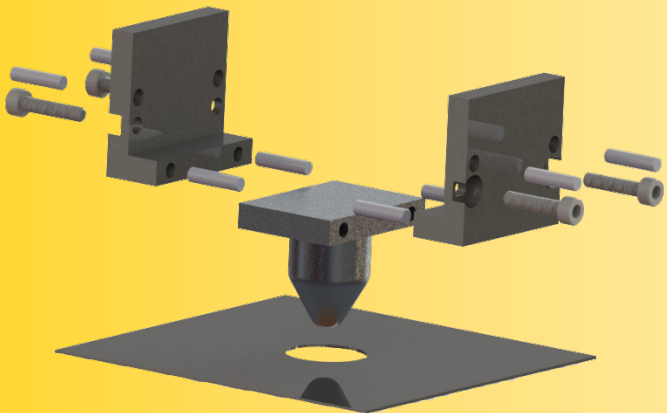
Degauss Technology

- Available on J-Series and Custom Solutions
- Removes Magnetic Footprint Left by Tool
- Integrated with Smart Technology
- Ideal for Powertrain and Hardened Steel Components

Pin Clamp Accessory Kit*	
Part #	Description
8800409	AR20 Pin Clamp Pole Shoe Kit
8800410	AR30 Pin Clamp Pole Shoe Kit
8800411	AR40 Pin Clamp Pole Shoe Kit
8800412	AR50 Pin Clamp Pole Shoe Kit

Standard pin clamp pole shoe kits fit all relevant magnet size part numbers  
\*Custom central pin sold separately

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.au](mailto:applications@magswitch.com.au) for design assistance and review.



</

Each Standard ball mount has a 28.5mm steel ball which can mount to many existing EOAT mounting arms, easily replacing existing tools on a fixture such as suction cups.



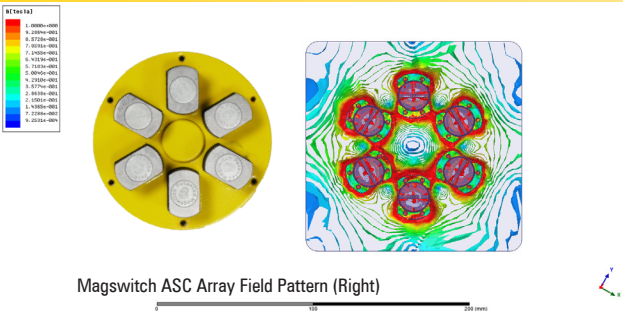
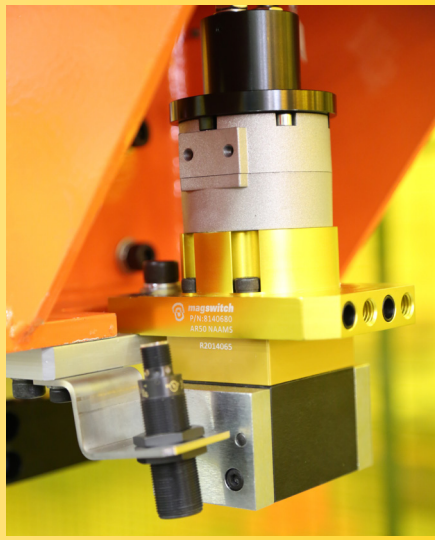
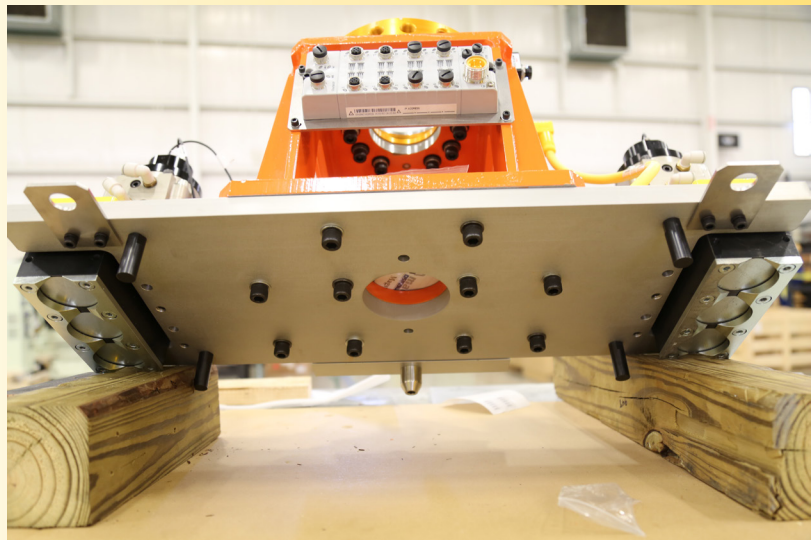
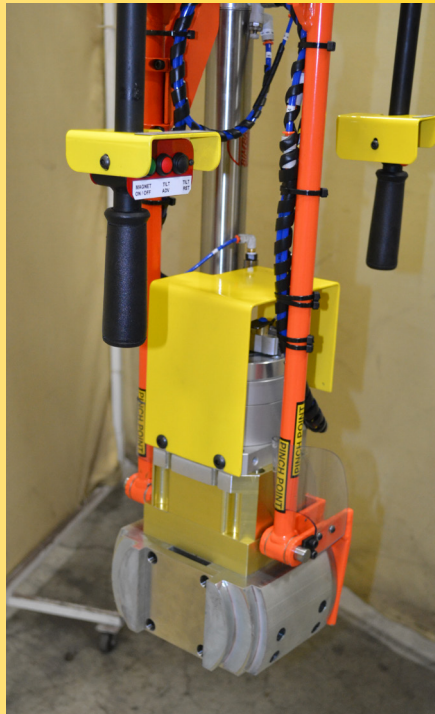
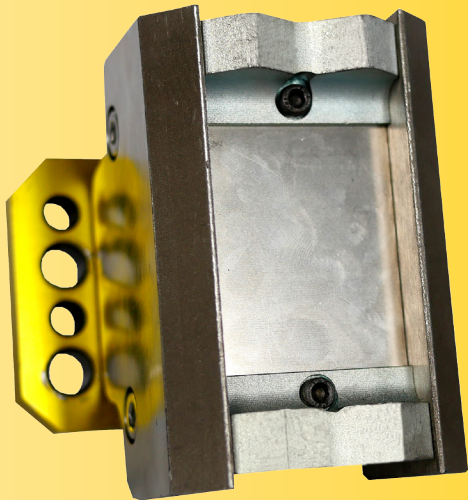
# Pole Shoe Customization

Stock replacement shoes for AR and LAY units

For custom shoes, please inquire with your distributor or direct to Magswitch. Even more custom accessories available upon request, including bin picking shielding (MagArmor) and unique pins.

- 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

*Pole shoe design may affect magnet performance*



## Magswitch Field Depth

Magswitch Technology’s product line offers two distinct magnetic field configurations, Deep or Shallow. Field depth is an important consideration when selecting a magnet for your application. It is controlled by magnet size and multiple magnet configurations, both proprietary features of Magswitch Technology. The thickness of ferrous material needed to absorb all magnetic flux from the magnet determines field depth. For example, insufficient thickness causes oversaturation, reducing the strength of the magnet when lifting a target. The oversaturation also provides a strong magnetic field in the air below the target material, sometimes resulting in the gripper trying to lift or attach any adjoining component to the target material. Always be sure to thoroughly test all applications and when possible consult your distributor or Magswitch representative directly.

### Deep Field

Deep field units will work best on thicker materials and materials that have an air gap, such as uneven or rough surface, dirt, rust, debris, paint or any other surface imperfection which prevents the magnet from making full contact with ferrous steel. Deep field magnets can achieve full saturation on imperfect targets where shallow field cannot.

### Shallow Field

Shallow field units will work best on thinner materials, such as sheet metal and stamped parts that have a flat picking surface large enough for the entire unit. Smaller magnets and interacting magnetic arrays create a shallow field that achieves full saturation on thin workpieces and allows accurate de-stacking of thin material.

Due to the scalability of the technology, shallow field configurations may be specified on any thickness material to optimize your cost/performance ratio.



Scan link or go to <http://youtu.be/gLEEu0jFL3w>

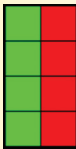
See this principle demonstrated here!

### Field Depth by Size:

The number in similar unit descriptions will indicate field depth. Larger number=Deeper field. E.g. M110>M70>M50

### Field Depth by Magnet Configuration:

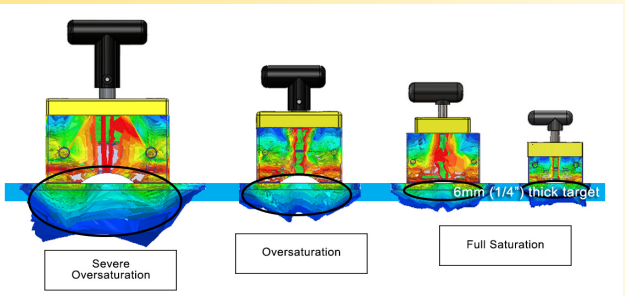
Deep Field = (N-S) (S-N) (N-S) Jointed Star  
Common poles should face each other. This is the case with our LAY and AY JSC series. Read the operation and design guidelines for more information on proper pole alignment and connectivity.



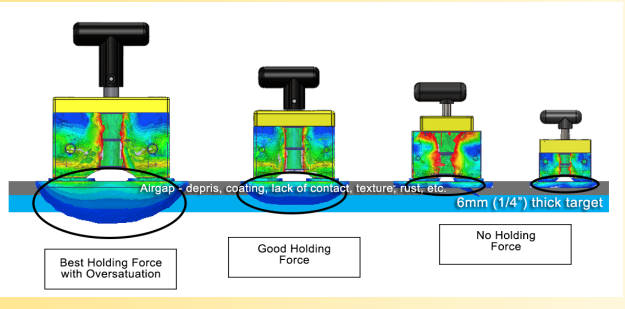
Shallow Field = (N-S) (N-S) (N-S) Alternating Star  
Dissimilar poles should face each other. This is the case with our AY ASC series which is specifically designed to hold better on thinner sheets. Field Depth is represented in the charts for each series by the Optimal Material Thickness Column.



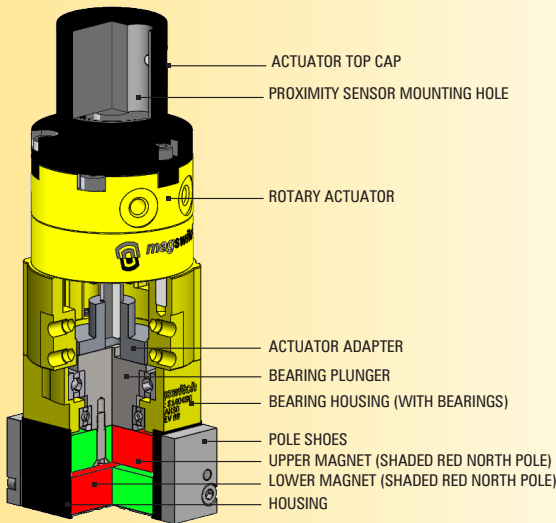
Field Depth (1/4in (6mm) thick target)  
Factors include total height and diameter of the housing (magnets). Housing shape is a lesser factor as well.



Airgap Performance (1/4in (6mm) thick target)



MAGSWITCH CUTAWAY – OFF POSITION



Guarenteed to 2.5 Million Cycles - Tested to 8 Million Cycles\*

*\*Subject to proper operation*



# Custom Applications/Machining

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.

Magswitch's application support utilizes the most advanced tools to provide the best application support in the industry. Using finite element analysis, our team can accurately determine the holding force of an End of Arm Tooling (EOAT) utilizing Magswitch tools with custom pole shoes on a client's part model. As part of the application process, Magswitch application engineers will identify correct tool size, quantity and placement on parts.

**No job is too large** for Magswitch. In 2014, Magswitch assisted a prominent integrator fully equip a large boiler manufacturer's newest facility with Magswitch tools as a platform technology. Magswitch assisted in developing fixtures with compliance to handle boiler components throughout the 16 automated stations providing a complete platform solution for the manufacturing processes.

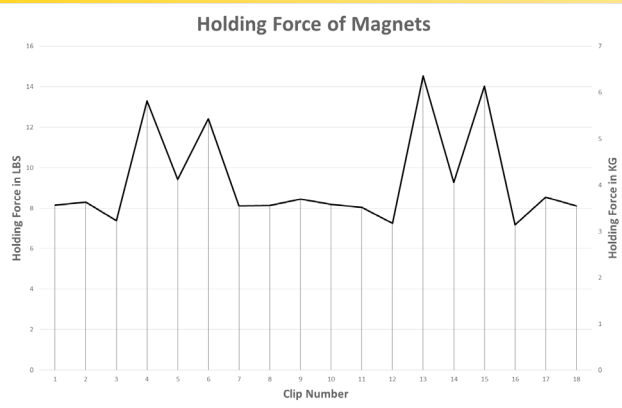


*Magswitch super heavy lifters are available in linear and circular arrays. Available in pneumatic actuation and capable of lifting heavy loads.*

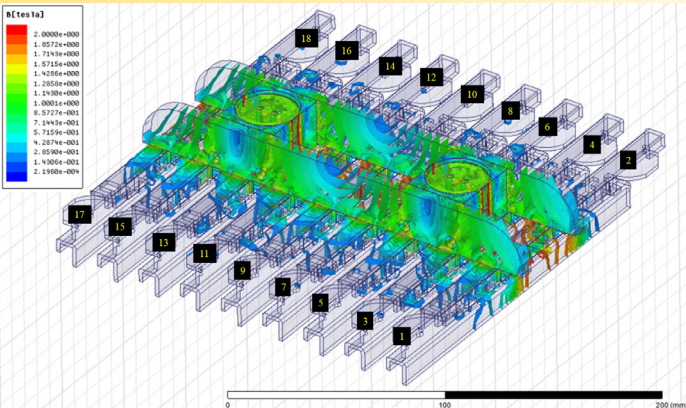


Scan link or go to <http://youtu.be/H80LH1vWpwU>

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.



Estimated holding force on each clip using 2 AR30 units with common pole shoe



Magnetic B Field of 2 AR30 units with a common pole shoe on 18 clips (numbered clips correlate with the holding force data on the left).

## Custom Design - Machine Components

**Magswitch offers custom machined components to help you with your application.**

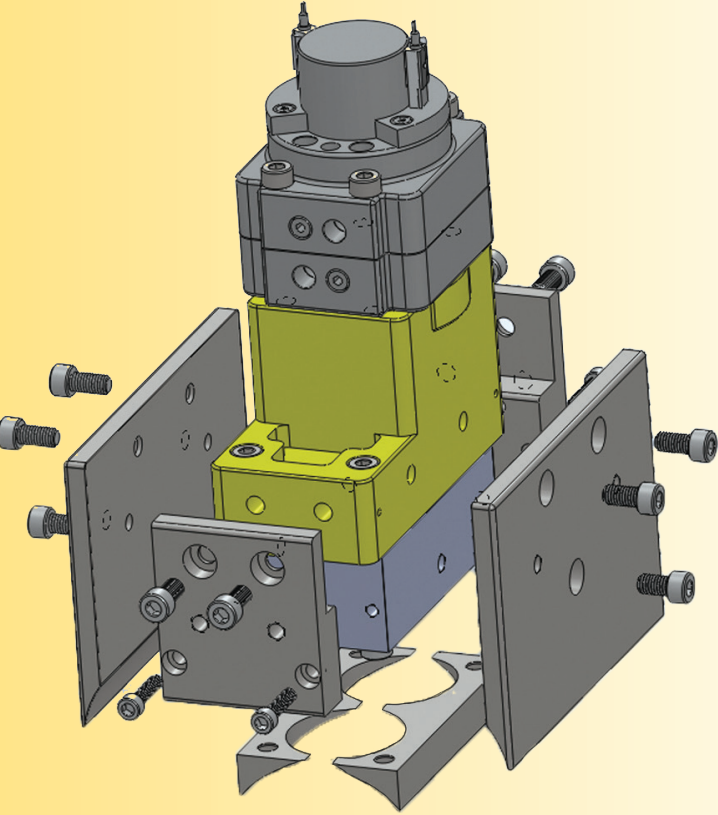
Don't hesitate to run your pole ideas past our engineers. If a custom pole shoe is required, Magswitch can provide design assistance to facilitate drawing generation. Custom accessory and fixture machining is also offered at competitive rates.

Send your designs to Magswitch for a free quotation.

Magswitch Technology  
1355 Horizon Avenue  
Lafayette, Colorado 80026

Phone: 303-468-0662  
Fax: 303-951-9918

Email: [applications@magswitch.com.au](mailto:applications@magswitch.com.au)





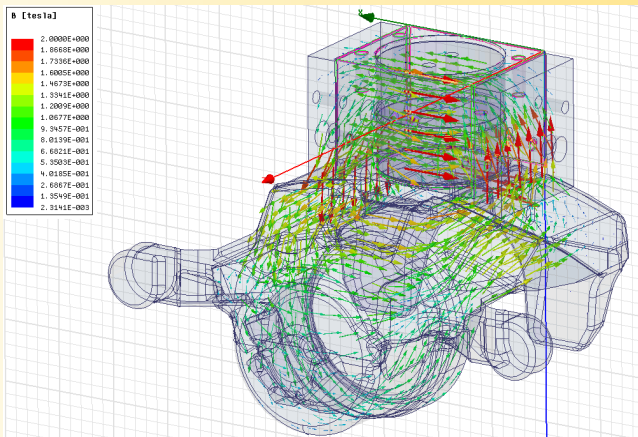
# Application Engineering Process

## Phase 1 – Collection of application details and initial evaluation

The 6 critical elements to selecting a tool are:

- 1. Material Grade – e.g. AISI 1020
- 2. Thickness
- 3. Weight
- 4. Shape
- 5. Surface Condition – coatings, treatments, roughness
- 6. Motion Profile

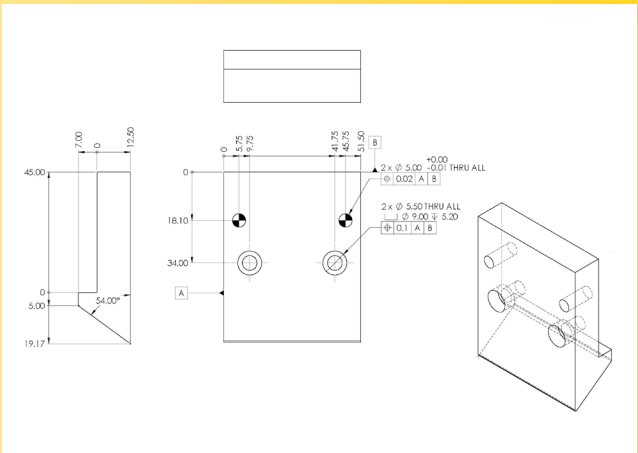
The Magswitch application engineering team will analyze the provided information to supply a basic recommended tool and quantity estimate.



## Phase 2 – Detailed Proposal

The detailed proposal includes the following:

- 1. Overview of application details
- 2. Tool selection
- 3. Tool placement on target component
- 4. Pole shoe design suggestion if necessary
- 5. Accessory design suggestion
- 6. ANSYS magnetic FEA analysis if required
- 7. Breakdown of safety factor analysis



# Magswitch Partners

Magswitch Technology partners with many great brands around the world to distribute our brand as well as integrate our patented technology into their brands and products. When it comes to choosing the best technology, global brands go with Magswitch. In some cases Magswitch designs and delivers complete products. In other case, OEM's choose to design and integrate Magswitch technology into new products in partnership with Magswitch application engineering.

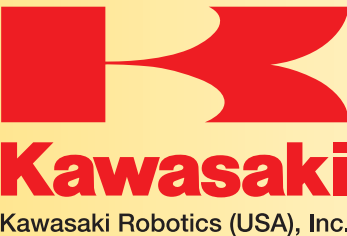
More great companies are changing the way their customers do things, from high tech, high voltage breaker systems and medical crash carts for increased safety, to high tech carbon fiber manufacturing in aerospace and deep sea ROV tools. It can be surprising how many place Magswitch Technology is found. We proudly support our partners, just as we do our own yellow tools.



Flange Wizard Inc.  
[www.flangewizard.com](http://www.flangewizard.com)



Gullco  
[www.gullco.com](http://www.gullco.com)



Kawasaki Robotics  
[robotics.kawasaki.com](http://robotics.kawasaki.com)



Lincoln Electric  
[www.lincolnelectric.com](http://www.lincolnelectric.com)



Arc Products  
[www.arcproducts.com](http://www.arcproducts.com)



Weld Tooling Corporation  
[www.bugo.com](http://www.bugo.com)



Carter Products  
[www.carterproducts.com](http://www.carterproducts.com)



CBS ArcSafe  
[www.cbsarcsafe.com](http://www.cbsarcsafe.com)



ESAB  
[www.esab.com](http://www.esab.com)



Essendant (formerly ADOX)  
[www.adoxoki.com](http://www.adoxoki.com)



ORS Nasco  
[www.orsnasco.com](http://www.orsnasco.com)



Tweco/Victor Technologies  
[www.victortechnologies.com](http://www.victortechnologies.com)  
[www.victortechnologies.com/tweco](http://www.victortechnologies.com/tweco)



## Magswitch U

### On-Site Training • Virtual Training • Application Library



Scan link or go to [www.magswitchmedia.com](http://www.magswitchmedia.com)



In 2015 Magswitch opened our state-of-the-art training center, located inside our Global Headquarters building near Denver, CO. The training center is outfitted with A/V equipment and is setup for interactive training. We bring in guests such as distributor partners, OEM partners, Magswitch employees, and customers to learn about our amazing new technology. Magswitch is committed to educating our partners and customers on the proper use of magnets in order to make their operations safer and more efficient.

Please call our office at 303-468-0662 to arrange a tour, or to find out when the next training session is scheduled.

## Magswitch On The Go

Magswitch On The Go is a great way to bring the showroom to the customer. This mobile trailer has been custom designed to demonstrate a wide range of Magswitch's product portfolio in a unique way. Customers get hands on training on how to use the products and in many cases, they find new and impressive ways to use the tools. The trailer has been all over the Gulf Coast and has been key to driving new products and innovations for implementations of Magswitch products. Additional demo vehicles are being added to the Magswitch fleet in 2016.





Marketing & Selling Tools

Once an individual sees the products in action, the value of Magswitch technology becomes readily apparent. Unlike any other industrial magnetic product, Magswitch delivers a unique, powerful, controlled magnetic field that drives value in unlimited industrial applications. Productivity, efficiency and safety are the hallmarks of the Magswitch Value Proposition (MVP).

Magswitch Demo Kits  
Compact / Durable / Professional

The Magswitch Demo Kit is a great selling tool to use with customers. The versatility, safety and productivity is on display and in the hands of users when demonstrating these kits. Customers can see the technology in action and really understand the MVP!



- Part #8800589**
- Steel Demo Plates (2)
  - MagSquare 165
  - MagSquare 600
  - Pivot Angle 200
  - Mini Multi Angle w/ 300 Amp Ground
  - 600 Amp Ground Clamp

Part #	Description
8800125	Large Manual Tools & Lifting Demo Kit
8800589	Small Manual Tools Demo Kit
8800440	Automation Demo Kit

Additional sizes available



- Part #8800125**
- 90 Degree Angle 400
  - Multi Angle 400 MagVise
  - Cordless Electric Hand Lifter
  - MagSquare 165 (2)
  - MagSquare 600
  - MagMount 235
  - 300 Amp Ground Clamp
  - MagJig 60 Keychain (10)
  - Steel Demo Plates (2)
  - MLAY 600x4 Lifting Magnet
  - Multi Angle 1000 MagVise
  - Pivot Angle 200
  - Mini Multi Angle w/ 300 Amp Ground
  - MagSquare 400
  - 600 Amp Ground Clamp
  - Steel Demo Pipe
  - Steel Shot in Container

Marketing Materials

The Magswitch Marketing Department is available for support with trade shows, showrooms and events, photography, videography, literature, Magswitch demo table, steel shot, MagDrill demo plate signage and give-a-ways.

For questions regarding marketing products and services contact [marketing@magswitch.com.au](mailto:marketing@magswitch.com.au) or call 303-468-0662.



Selecting the Right Magswitch Lifter

**Choosing the right lifter is very important for safer lifting.** Lift ratings vary dramatically due to a number of variables. ALWAYS select lifters based on what you are lifting. American Society of Mechanical Engineers (ASME) stipulates you MUST consider the following:

What is the thickness of the material?

1/4 inch or less

☐

1/4 inch - 1/2 inch

☐

1/2 inch - 3/4 inch

☐

3/4 inch +

☐

If 1/2 inch or less – you need a shallow-field tool. The MLAY600 Series is designed specifically for 1/2 inch material from 200 lbs to 800 lbs in one stability improved unit.

What is the weight of the material?

lbs

NEVER lift material that is heavier than the Max. Safe Working Load (SWL) of the tool.

What is the type of steel (grade)?

Lift ratings based on AISI 1020 steel. Consider de-rating factors when working with other grades of steel (refer to page 26 for de-rating table).

What is the geometry of the material?

Shape

Dimensions

If round or irregular in shape – The MLAY1000 Series is our deep field unit, which is designed for coated steel, rough surfaces and round stock.

Is remote ON/OFF control required?

YES

☐

NO

☐

For moving steel in hard-to-reach or unsafe locations, consider the Cordless Electric (CE) Heavy Lifter.

What is the surface condition?

Rust

☐

Paint

☐

Plating

☐

Mill Scale

☐

Coating

☐

Other

☐

Air gaps created by rust, paint, coatings, mill scale, etc. will effect load rating.

What is the method of lift?

Forklift

☐

Under Hook

☐

Magswitch Delivers Safety:

**Always Play It Safe.** Saving a few dollars on a magnetic lifter is not worth the risk. Please consult your Magswitch dealer for recommendations specific to your application. Fill out inquiry form here: <http://magswitch.com.au/information-request/>



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