

Mag-Con™

MAGNETIC CONNECTOR FOR THE
WHIRLIGIG® TARGET / BRACKET/ GUARD

WARNING



STRONG MAGNET!
Can be harmful to
pacemaker wearers
and others with
medical implants.



U.S. Patent #6,964,209

INSTALLATION INSTRUCTIONS

OPERATION MANUAL

Part No.'s - MAG2000, MAG2000M

www.go4b.com/usa

Dear 4B Customer:

Congratulations on your purchase. 4B appreciates your business and is pleased you have chosen our products to meet your needs.

Please read in its entirety and understand the literature accompanying the product before you place the product into service. Please read the safety precautions carefully before operating the product. With each product you purchase from 4B, there are some basic but important safety considerations you must follow to be sure your purchase is permitted to perform its design function and operate properly and safely, giving you many years of reliable service. Please read and understand the Customer Safety Responsibilities listed below. Failure to follow this safety directive and the Operation Manuals and other material furnished or referenced, may result in serious injury or death.

SAFETY NOTICE TO OUR CUSTOMERS

- A. In order to maximize efficiency and safety, selecting the right equipment for each operation is vital. The proper installation of the equipment, and regular maintenance and inspection is equally important in continuing the proper operation and safety of the product. The proper installation and maintenance of all our products is the responsibility of the user unless you have asked 4B to perform these tasks.
- B. All installation and wiring must be in accordance with Local and National Electrical Codes and other standards applicable to your industry. (Please see the article "Hazard Monitoring Equipment Selection, Installation and Maintenance" at www.go4b.com.) The installation of the wiring should be undertaken by an experienced and qualified professional electrician. Failure to correctly wire any product and/or machinery can result in the product or machine failing to operate as intended, and can defeat its design function.
- C. Periodic inspection by a qualified person will help assure your 4B product is performing properly. 4B recommends a documented inspection at least annually and more frequently under high use conditions.
- D. Please see the last page of this manual for all warranty information regarding this product.

CUSTOMER SAFETY RESPONSIBILITIES

1. READ ALL LITERATURE PROVIDED WITH YOUR PRODUCT

Please read all user, instruction and safety manuals to ensure that you understand your product operation and are able to safely and effectively use this product.

2. YOU BEST UNDERSTAND YOUR NEEDS

Every customer and operation is unique, and only you best know the specific needs and capabilities of your operation. Please call the 24-hour hotline at 309-698-5611 for assistance with any questions about the performance of products purchased from 4B. 4B is happy to discuss product performance with you at any time.

3. SELECT A QUALIFIED AND COMPETENT INSTALLER

Correct installation of the product is important for safety and performance. If you have not asked 4B to perform the installation of the unit on your behalf, it is critical for the safety of your operation and those who may perform work on your operation that you select a qualified and competent electrical installer to undertake the installation. The product must be installed properly to perform its designed functions. The installer should be qualified, trained, and competent to perform the installation in accordance with Local and National Electrical Codes, all relevant OSHA Regulations, as well as any of your own standards and preventive maintenance requirements, and other product installation information supplied with the product. You should be prepared to provide the installer with all necessary installation information to assist in the installation.

4. ESTABLISH AND FOLLOW A REGULAR MAINTENANCE AND INSPECTION SCHEDULE FOR YOUR 4B PRODUCTS

You should develop a proper maintenance and inspection program to confirm that your system is in good working order at all times. You will be in the best position to determine the appropriate frequency for inspection. Many different factors known to the user will assist you in deciding the frequency of inspection. These factors may include but are not limited to weather conditions; construction work at the facility; hours of operation; animal or insect infestation; and the real-world experience of knowing how your employees perform their jobs. The personnel or person you select to install, operate, maintain, inspect or perform any work whatsoever, should be trained and qualified to perform these important functions. Complete and accurate records of the maintenance and inspection process should be created and retained by you at all times.

5. RETAIN AND REFER TO THE OPERATION MANUAL FOR 4B'S SUGGESTED MAINTENANCE AND INSPECTION RECOMMENDATIONS

As all operations are different, please understand that your specific operation may require additional adjustments in the maintenance and inspection process essential to permit the monitoring device to perform its intended function. Retain the Operation Manual and other important maintenance and service documents provided by 4B and have them readily available for people servicing your 4B equipment. Should you have any questions, please call the free 24-hour hotline number (309-698-5611).

6. SERVICE REQUEST

If you have questions or comments about the operation of your unit or require the unit to be serviced please contact the 4B location who supplied the product or send your request via fax (309-698-5615) or call us via our 24-hour hotline number in the USA (309-698-5611). Please have available product part numbers, serial numbers, and approximate date of installation. In order to assist you, after the product has been placed into service, complete the online product registration section which is accessed via our website www.go4b.com/usa.

! WARNING

- Always lockout and tagout the machine, rotating machinery can cause serious injury or death.
- O.S.H.A. requires that all exposed rotating shafts are provided with a full guard.
- Do not place anything between the magnet and metal, personal injury may occur.
- Mag-Con will erase magnetic strips from credit cards / door keys & other magnetic sensitive items.
- Mag-Con is not compatible with stainless steel shafts (non-ferrous metal).

PRODUCT OVERVIEW

The Mag-Con™ is an optional magnetic connector that screws onto the Whirligig® and magnetically couples it to the shaft being monitored. This allows secure and simple installation of the Whirligig® without drilling and tapping the machines shaft. The Mag-Con has been designed to work with 4B's Whirligig universal shaft sensor mount, do not use with other manufacturer's products.

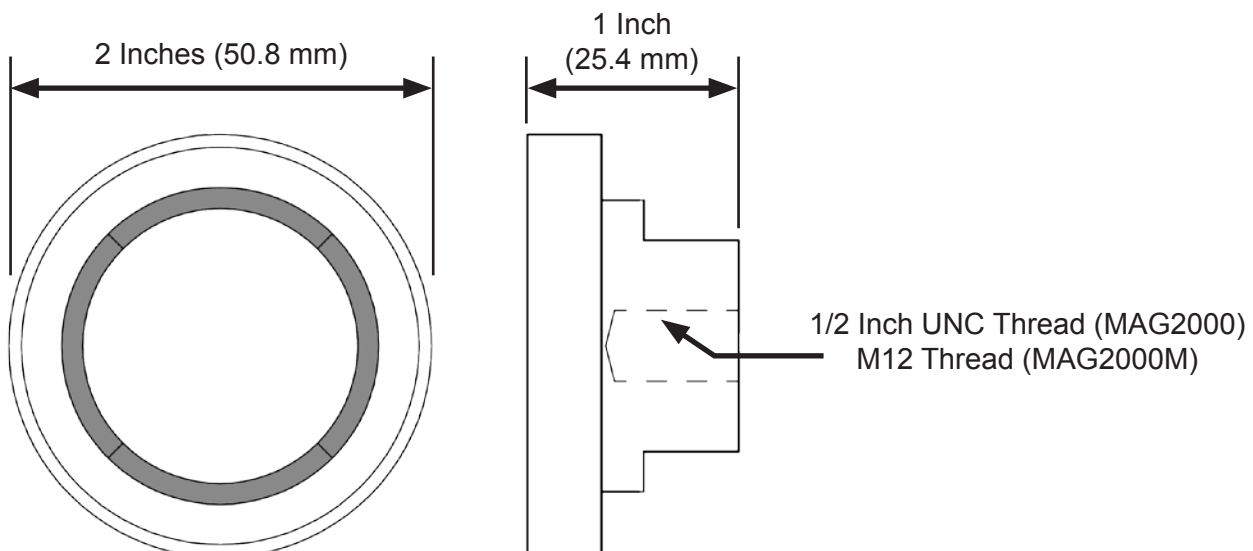
SPECIFICATIONS

Material	Stainless Steel
Thread Size	1/2 Inch UNC (MAG2000) M12 (MAG2000M)
Holding Force	Over 100 lbs.
Maximum Shaft Speed	300 RPM
Minimum Shaft Diameter	1-7/8 Inches
Operating Temperatures	-40°F (-40°C) to 194°F (90°C)

NOTE

For shaft diameters smaller than 1-7/8 inches, install the steel keeper onto the shaft. Counter sink the steel keeper and attach to the shaft using counter sink screws so that the Mag-Con fits completely flush onto the keeper. This solution can also be used for stainless steel shaft applications.

DIMENSIONS



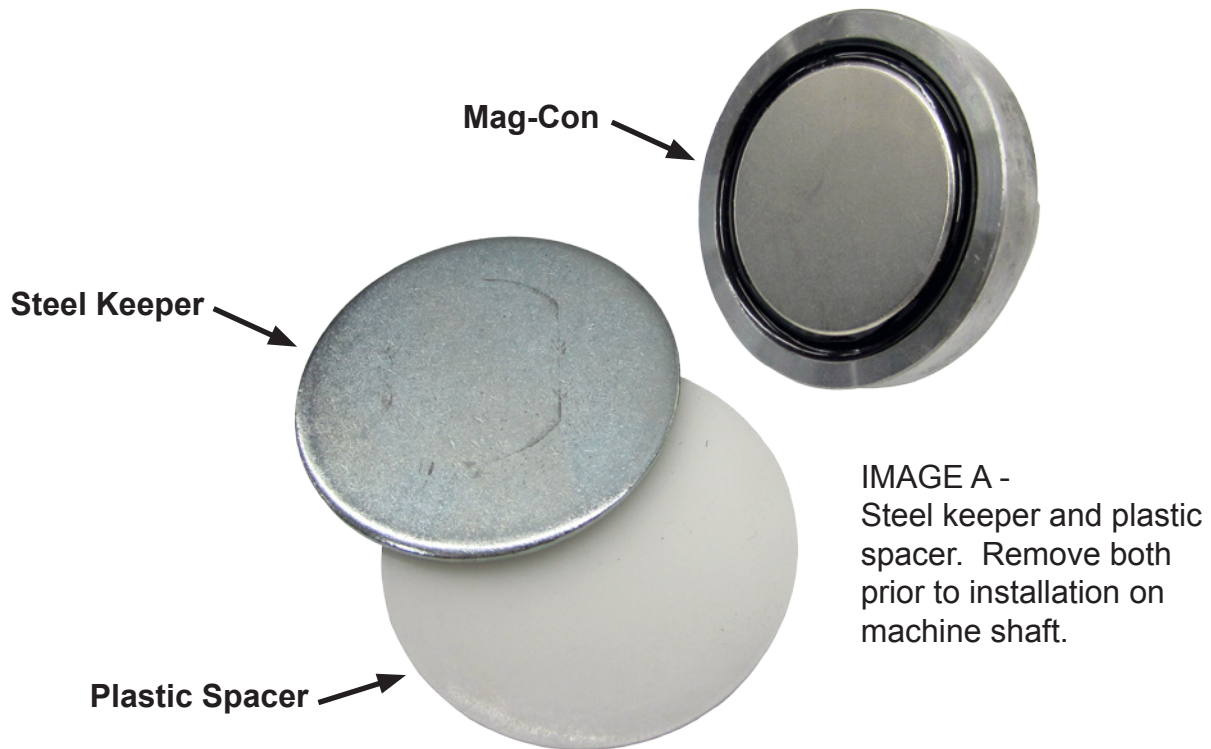
INSTALLATION

The following instructions are for the Whirligig® universal shaft sensor mount -

1. Remove the black rubber protector on the Whirligig threads.
2. Apply thread locker to the threads on the Mag-Con.
3. Thread the Mag-Con onto the Whirligig.
4. To tighten the Mag-Con, use a 1 inch open ended wrench on the Mag-Con and a 5/8 inch open ended wrench on the shaft of the Whirligig.
5. Once the Mag-Con has been tightened, remove steel keeper and plastic spacer from the Mag-Con (Image A).
6. Attach Mag-Con onto the center of the machine shaft.
7. Follow the manufacturer's installation instructions for sensors, and observe all relevant electrical codes and OSHA regulations.

WARNING

DO NOT remove installed Whirligig while shaft is rotating, serious injury may occur.



NOTE

The Mag-Con ships with a steel keeper and plastic spacer to protect it during shipping. Both should be removed and discarded prior to installation.

TROUBLESHOOTING GUIDE

FAULT	REMEDY
Mag-Con does not stick securely to the shaft.	<ol style="list-style-type: none"> 1. Make sure shaft is ferrous steel and not stainless steel. 2. Shaft size should be a minimum of 1-7/8 inches in diameter. If not, see note on page 4. 3. Check that surface of shaft is flat and rust free.

Whirligig®

The Whirligig® is a fully guarded target for easy mounting of motion sensors. It is a universal shaft sensor mount suitable for all industry standard cylindrical or DIN style inductive sensors including 4B's line of speed switch and inductive proximity sensors.

The sensor bolts to the Whirligig base plate and the complete assembly either bolts to the machines shaft through a 1/2 inch UNC tapped hole, or is connected magnetically using 4B's patented Mag-Con adaptor. Shaft or machine vibration does not affect the performance of the sensor, as the whole assembly moves with the shaft. With the Whirligig, sensor installation is simple, safe and reliable.



IMAGE C - Whirligig Fully Assembled

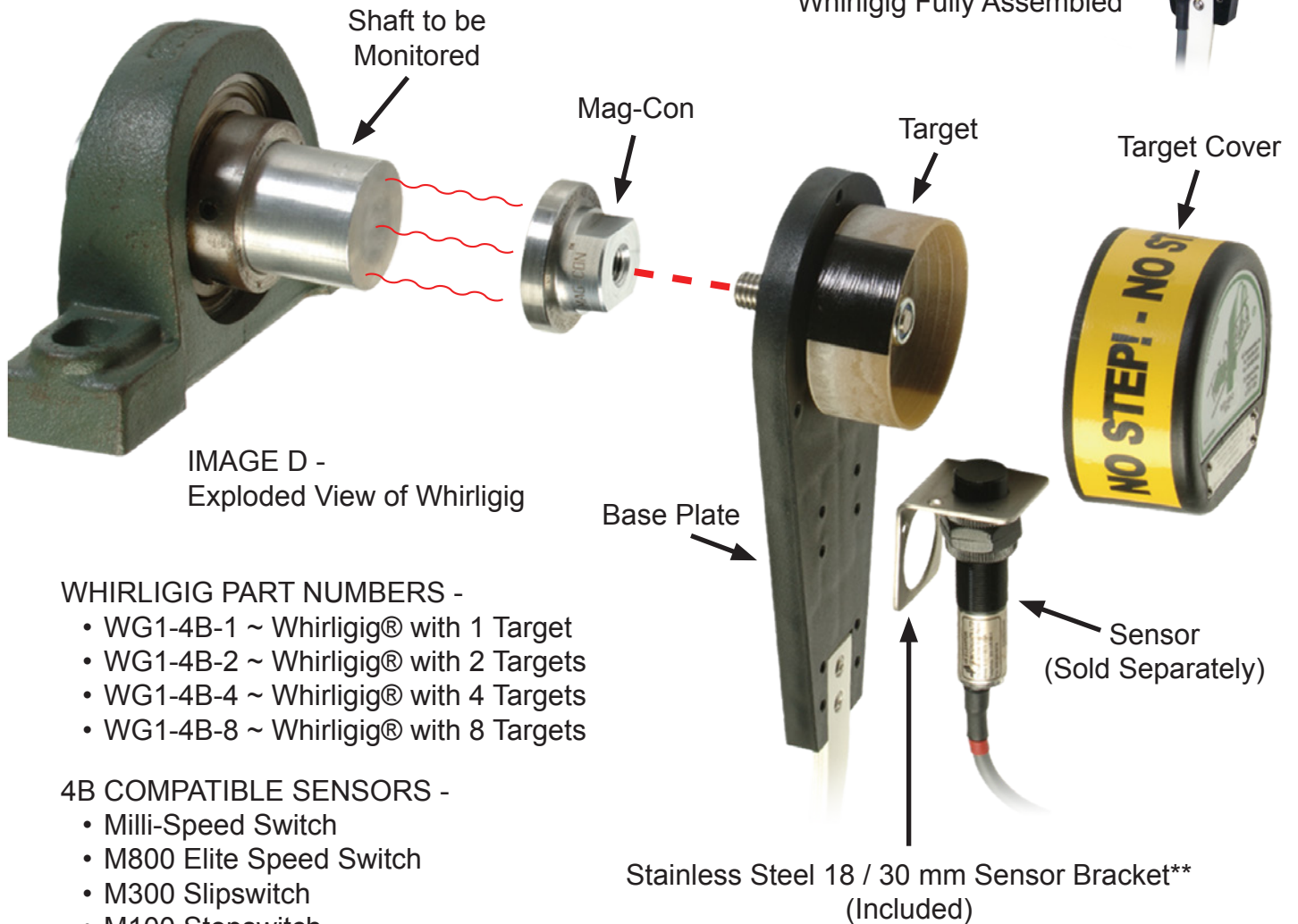


IMAGE D - Exploded View of Whirligig

WHIRLIGIG PART NUMBERS -

- WG1-4B-1 ~ Whirligig® with 1 Target
- WG1-4B-2 ~ Whirligig® with 2 Targets
- WG1-4B-4 ~ Whirligig® with 4 Targets
- WG1-4B-8 ~ Whirligig® with 8 Targets

4B COMPATIBLE SENSORS -

- Milli-Speed Switch
- M800 Elite Speed Switch
- M300 Slipswitch
- M100 Stopswitch
- P800 Proxswitch
- P300 Proxswitch
- P100 Proxswitch

Stainless Steel 18 / 30 mm Sensor Bracket**
(Included)

** DIN style sensors attach directly to the base plate, bracket not required.

PRODUCT WARRANTY

1. EXCLUSIVE WRITTEN LIMITED WARRANTY

ALL PRODUCTS SOLD ARE WARRANTED BY THE COMPANY (4B COMPONENTS LIMITED, (4B) BRAIME ELEVATOR COMPONENTS LIMITED, AND (4B) S.E.T.E.M. Srl) HEREIN AFTER REFERRED TO AS 4B TO THE ORIGINAL PURCHASER AGAINST DEFECTS IN WORKMANSHIP OR MATERIALS UNDER NORMAL USE FOR ONE (1) YEAR AFTER DATE OF PURCHASE FROM 4B. ANY PRODUCT DETERMINED BY 4B AT ITS SOLE DISCRETION TO BE DEFECTIVE IN MATERIAL OR WORKMANSHIP AND RETURNED TO A 4B BRANCH OR AUTHORIZED SERVICE LOCATION, AS 4B DESIGNATES, SHIPPING COSTS PREPAID, WILL BE, AS THE EXCLUSIVE REMEDY, REPAIRED OR REPLACED AT 4B'S OPTION.

2. DISCLAIMER OF IMPLIED WARRANTY

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3. NO WARRANTY "BY SAMPLE OR EXAMPLE"

ALTHOUGH 4B HAS USED REASONABLE EFFORTS TO ACCURATELY ILLUSTRATE AND DESCRIBE THE PRODUCTS IN ITS CATALOGS, LITERATURE, AND WEBSITES, SUCH ILLUSTRATIONS AND DESCRIPTIONS ARE FOR THE SOLE PURPOSE OF PRODUCT IDENTIFICATION AND DO NOT EXPRESS OR IMPLY A WARRANTY AFFIRMATION OF FACT, OF ANY KIND OR A WARRANTY OR AFFIRMATION OF FACT THAT THE PRODUCTS WILL CONFORM TO THEIR RESPECTIVE ILLUSTRATIONS OR DESCRIPTIONS. 4B EXPRESSLY DISCLAIMS ANY WARRANTY OR AFFIRMATION OF FACT, EXPRESSED OR IMPLIED, OTHER THAN AS SET FORTH IN THE EXCLUSIVE WRITTEN LIMITED WARRANTY STATEMENT ABOVE, INCLUDING, WITHOUT LIMITATION, THE IMPLIED WARRANTIES OF MERCHANTABILITY AND FITNESS FOR A PARTICULAR PURPOSE.

4. LIMITATION OF DAMAGES

ANY LIABILITY FOR CONSEQUENTIAL, INCIDENTAL, SPECIAL, EXEMPLARY, OR PUNITIVE DAMAGES, OR FOR LOSS OF PROFIT WHETHER DIRECT OR INDIRECT, IS EXPRESSLY DISCLAIMED.

With subsidiaries in North America, Europe, Asia, Africa and Australia along with a worldwide network of distributors, 4B can provide practical solutions for all your applications no matter the location.



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