



AD500

Automatic Door Operator

The **AD500** automatic swing door operator offers the most simple and convenient solution for residential, commercial, or institutional applications where opening doors manually would be difficult or laborious. Ideal for environments where doors must be opened without contact for hygiene reasons or as disability entrance solutions, such as restrooms, hospitals, labs, or healthcare facilities.



Compliance

UL/CUL 325, EN 61000-3-2, EM 61000-3-3, EN 61000-6-1, EN 61000-6-3, IEC 61000-4-2 ~ IEC 61000-4-6, IEC 61000-4-8, IEC 61000-4-11, EN 60950-1



**100 to 240
VAC Input**

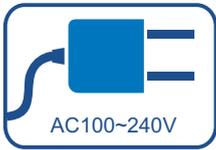
**Obstruction
detection**

**Easy
Access**

**Application
Versatility**

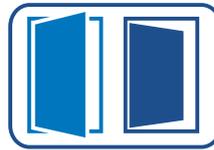


AD500 FEATURES



Universal Input Voltage

Operates on 100~240 VAC to meet voltage requirement worldwide.



Any Swing Door Action

Designed with 2 types of arm systems for inswing, outswing, left hand and right hand doors.



Access Control Interface

Works with electric locks, exit buttons, access control readers/keypads and other accessories.



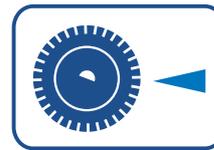
Safety Sensor

When used with safety sensor, the operator will stop to prevent accidents if an obstruction is detected.



Selectable Hold-Open Time

Can be adjusted to up to 30 seconds for the wheelchairs or handicapped.



High Accuracy

A built-in photocell and encoder are used to control the action of the operating arm. Desired opening angle and appropriate decelerating distances can be accurately managed.



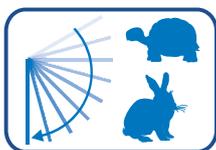
Quiet & Reliable

Allows smooth and quiet operation.



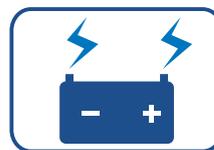
Wide Applications

Suitable for doors with width between 75 ~ 120 cm and weight between 50 ~ 150 kg .



Adjustable Operating Speed

Adjustable stepless opening and closing speed and motor torque. For use on different types of doors.



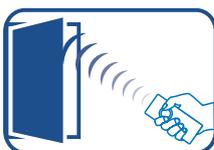
Backup Battery

When power fails, an external backup battery maintains normal operation.



4 Operation Modes

Includes a control box for selectable operation modes: auto, manual, hold-open or push & go. Manually close the door during the manual mode.



Remote Control

Can be used in conjunction with wireless remote control devices.



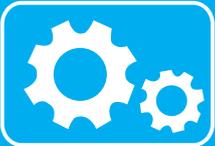
Auto Mode

The AD500 operates to open and close the door automatically.



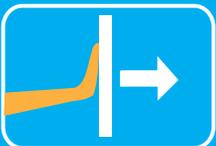
Hold-Open Mode

Activate the AD500 and the door holds open allowing for heavy traffic. Change to auto mode and the door closes.



Manual Mode

Used as a manual door closer, the AD500 operates when power turns off.



Push Mode (Push & Go)

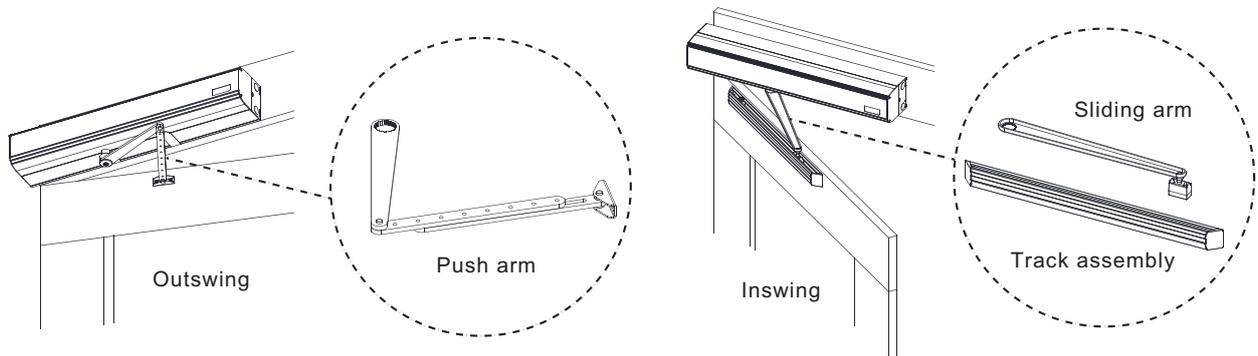
Push the door slightly and then AD500 operates in auto mode. During this mode, the electric lock remains unlocked.



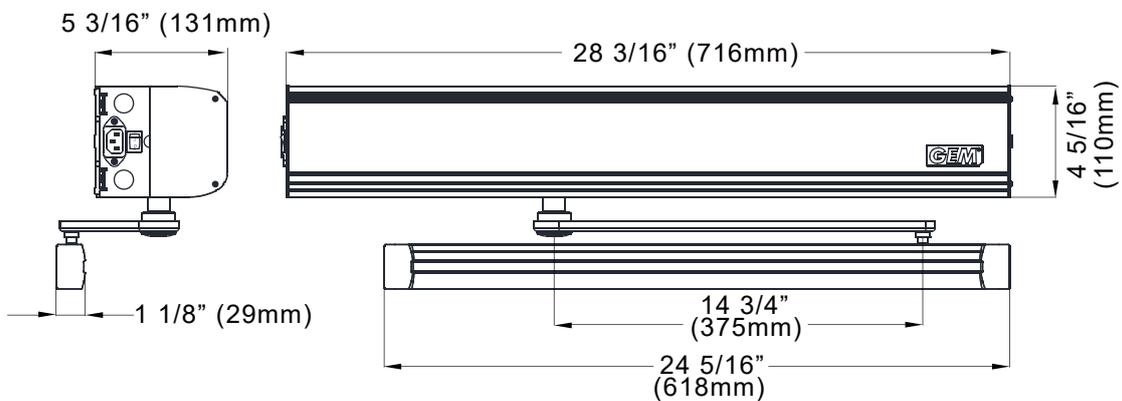
OPB-500AD
Operation Controller
(Included)

Non-Handed Installation

Designed with application flexibility in mind, the AD500 is suitable for right or left handed doors and can be installed on either side of the door header for inswing or outswing (push or pull) application.



Dimensions



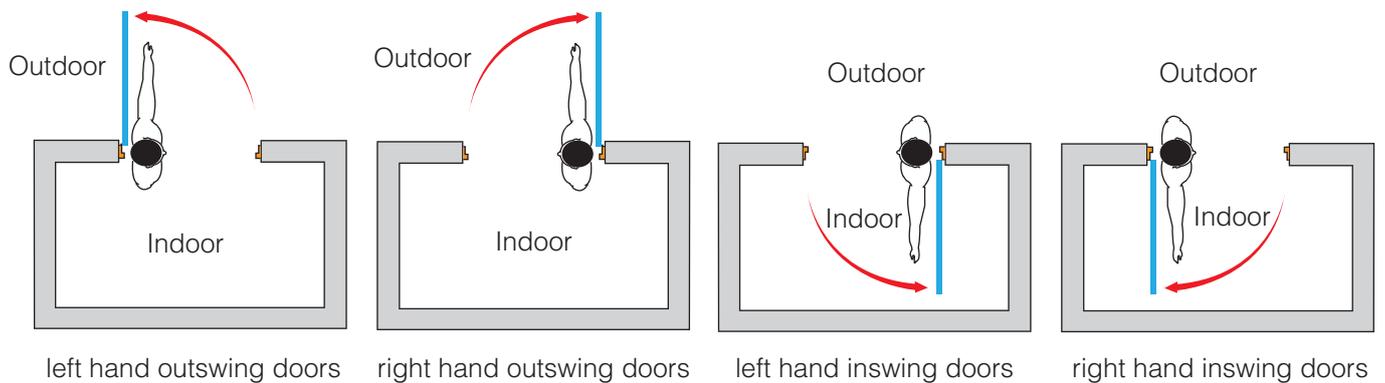
Specifications	
Power Input	100-240V AC +10/-15%, 50/60 Hz
Motor	60 VDC, 2A Max.
Current Draw	3.2A max 77 W., 0.21 - 0.45 A average (motor)
Adjustment	Opening Speed, Closing Speed, Backcheck/Latchcheck Position, Hold-Open Time
Standard Control Inputs	Activation, Safety Device Input, 24 VDC Battery Input
Switch Functions	DIP Switches: Automatic, Manual Power On/Off switch
Operation Controller	Functions: Automatic, Manual, Push & Go, Hold-Open, Activation Dimensions: 79 (W) x 125 (H) x 45 (D) mm (Surface); 79 (W) x 125 (H) x 4 (D) mm (Mortise) Included: Stainless steel faceplate, 3 mm cable, tamper resistant security screws, back box
Door Specs	Maximum Opening Angle: 80~120° Door Width: 750~1200mm Door Height: 110 1/4" (280 cm) Door Weight: 50 ~150 kg

Warranty

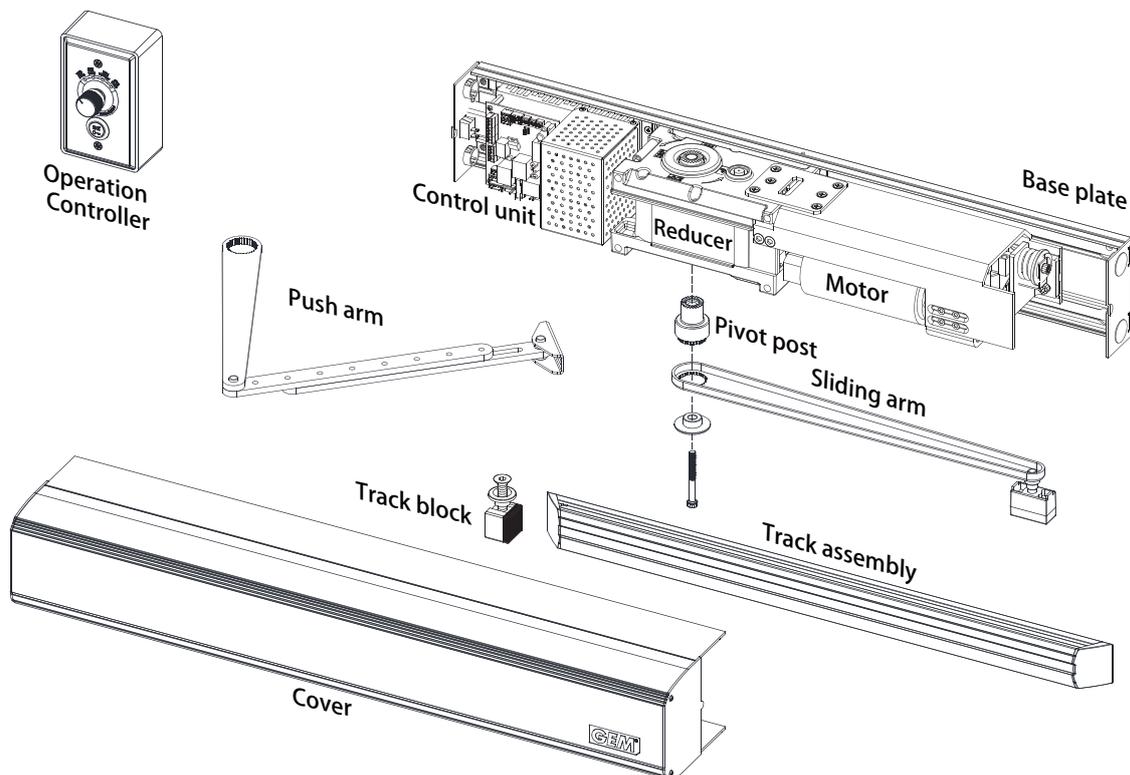
The product is warranted against defects in material and workmanship while used in normal service for a period of 3 years from the date of sale to the original client. The GEM policy is one of continual development and improvement; therefore GEM reserves the right to change specifications without notice.

Before -Installation

- For security and vandalism protection, always mount the operator access in the interior of a building whenever possible.
- Examine the indoor and outdoor pressure conditions before installing the AD500. To assure the proper operation and the best performance, please make a regular check of your operator.
- Make sure that the door leaf is properly reinforced at the installation points.
- Consider all power wire entry locations and signaling wires before preparing for installation.
- Stand with your back against the hinges. If door opens at your left side, it is left-handed. If door opens at your right side, it is right-handed. Right Hand shown in the diagram.
- Make sure the door swing direction is left hand or right hand, or inswing or outswing, the operator must be installed inside of the room.

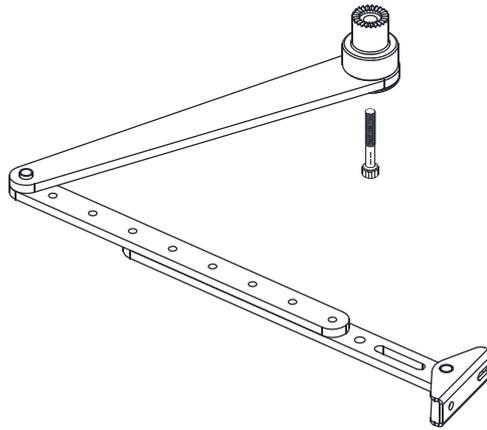


Part Identification

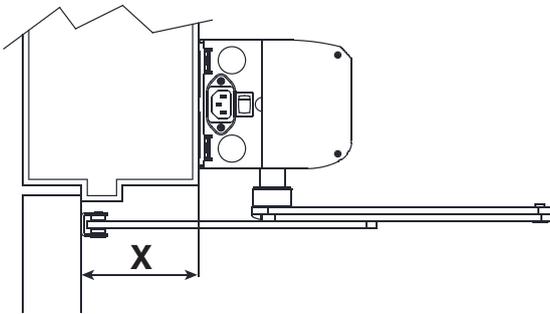


Push arm

Use the push arm for Outswing doors. Use the lengthen arm if the depth ("X") exceeds 150 mm. For lengthen arm, the "X" maximum depth cannot exceed 300 mm.

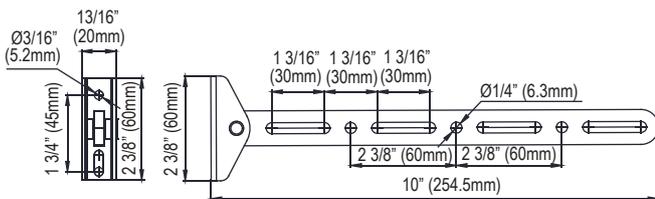


PUSH-Arm Extensions

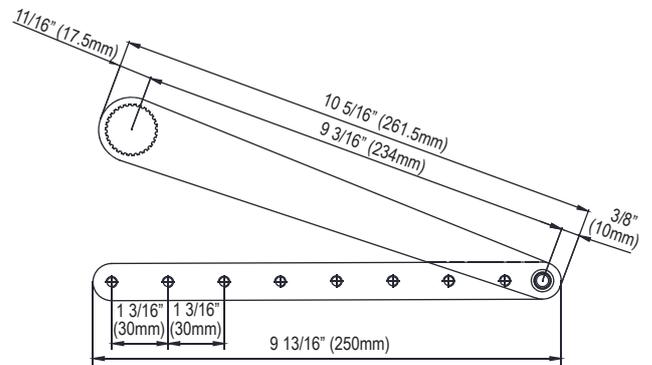


Reveal =X	Extension
Up to 5-15/16" (0-150mm)	Standard arm
5-15/16" to 11-13/16"(150-300mm)	Lengthen arm

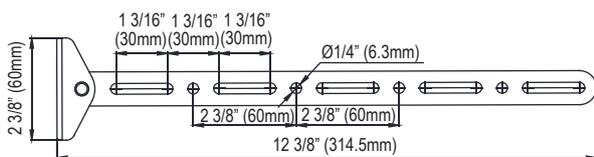
Standard Arm Dimensions



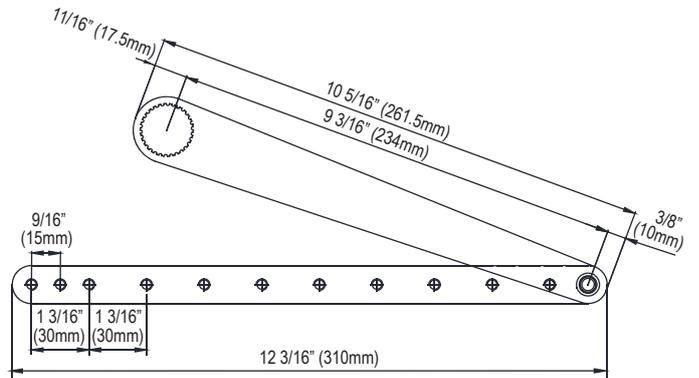
P/N : ARM-500AD-3



Lengthen Arm Dimensions

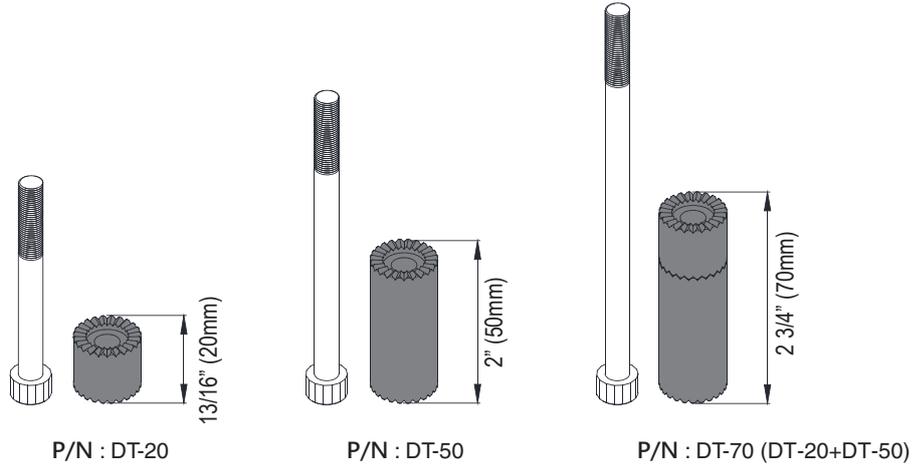


P/N : ARM-500AD-3L

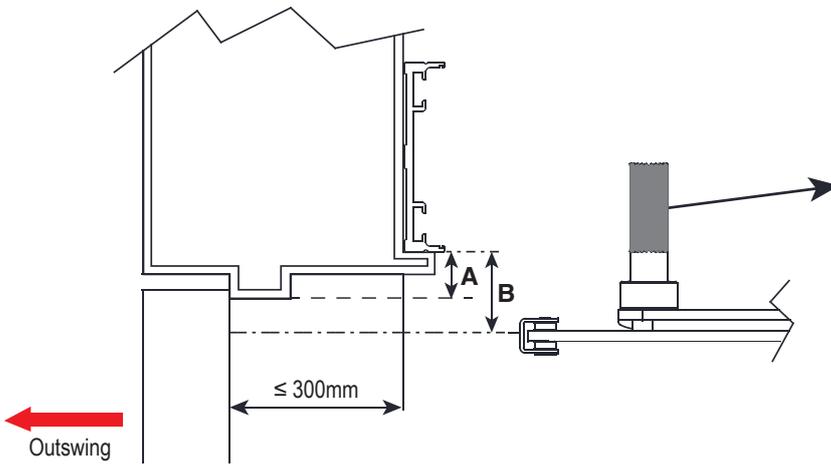


Drive shaft extension kits

Shaft extensions are used for specific door frames.

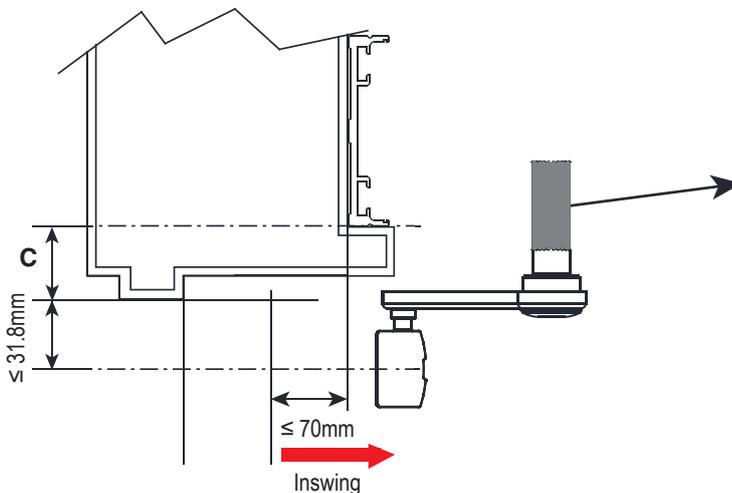


Operator with PUSH arm system



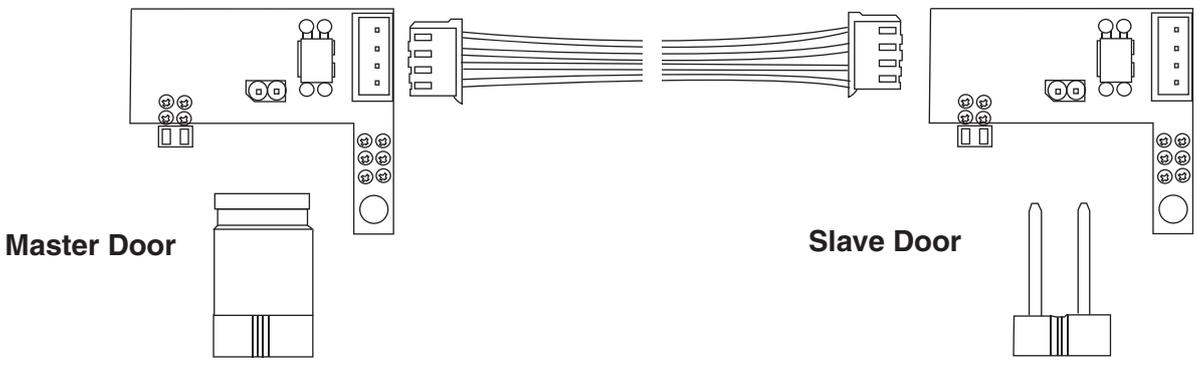
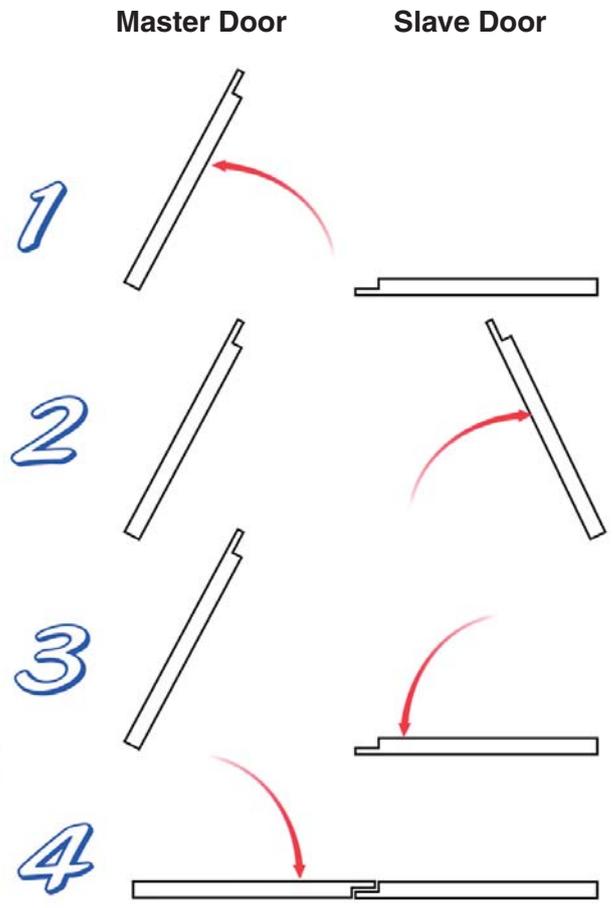
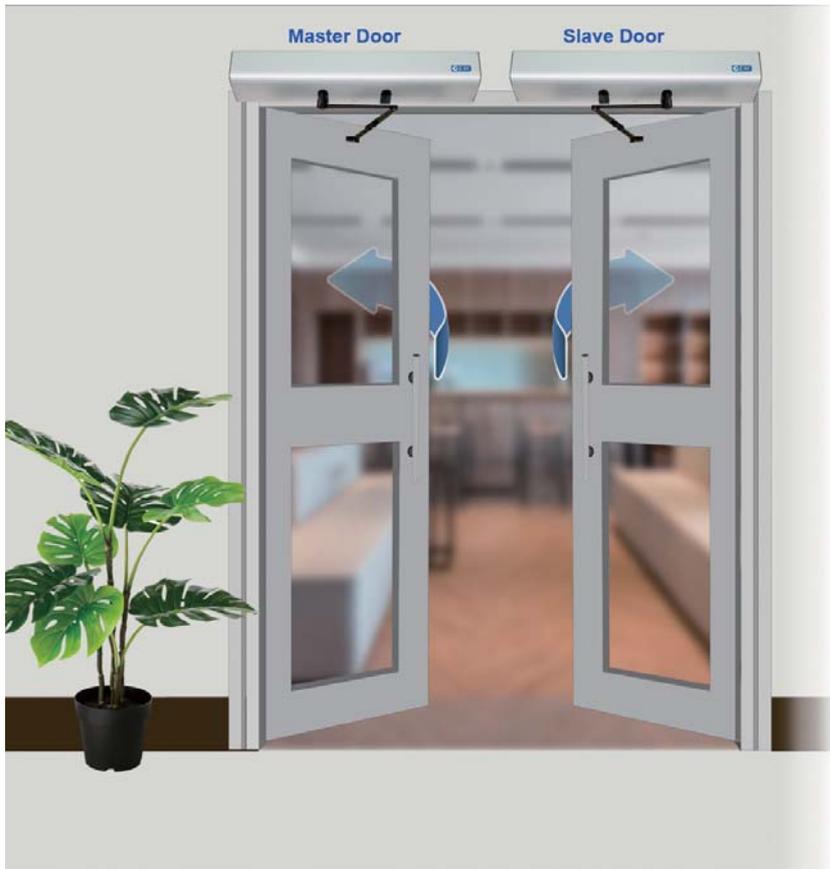
P/N		A	B
—		0 ~ 30mm	50mm
DT-20	20mm	30 ~ 50mm	70mm
DT-50	50mm	50 ~ 80mm	100mm
DT-70	70mm	80 ~ 100mm	120mm

Operator with Sliding arm system



P/N		C
—		0 ~ 37mm
DT-20	20mm	37 ~ 57mm
DT-50	50mm	57 ~ 87mm
DT-70	70mm	87 ~ 107mm

Double Door Application



The AD500 is used for single door applications. For double door applications, use the AD500-DB (the interlock modules within 2 units of AD500 door operators connected in series). Program the master and slave door for astragal coordination. The master door opens first and then closes while the slave door closes first and then opens.



Double operator cover needs to be ordered specially.

Optional Accesses

Device 1,2,3,4,5,6 The relay output contacts (COM/NO) are connected to the Device Activation 2 or 3 input terminal on the PC board . Use the included 2-pin red/black wire harness. Please refer to the wiring diagram on page 5 (Control unit).



Go to www.gianni.tw
or contact us for more information.

CE Approved & UL Listed



CE Standards

EN 61000-6-3:2007+A1:2011, EN 61000-6-1:2007

EN 61000-3-2:2014, EN 61000-3-3:2013

IEC 61000-4-2:2008, IEC 61000-4-3:2006+A1:2007+A2:2010

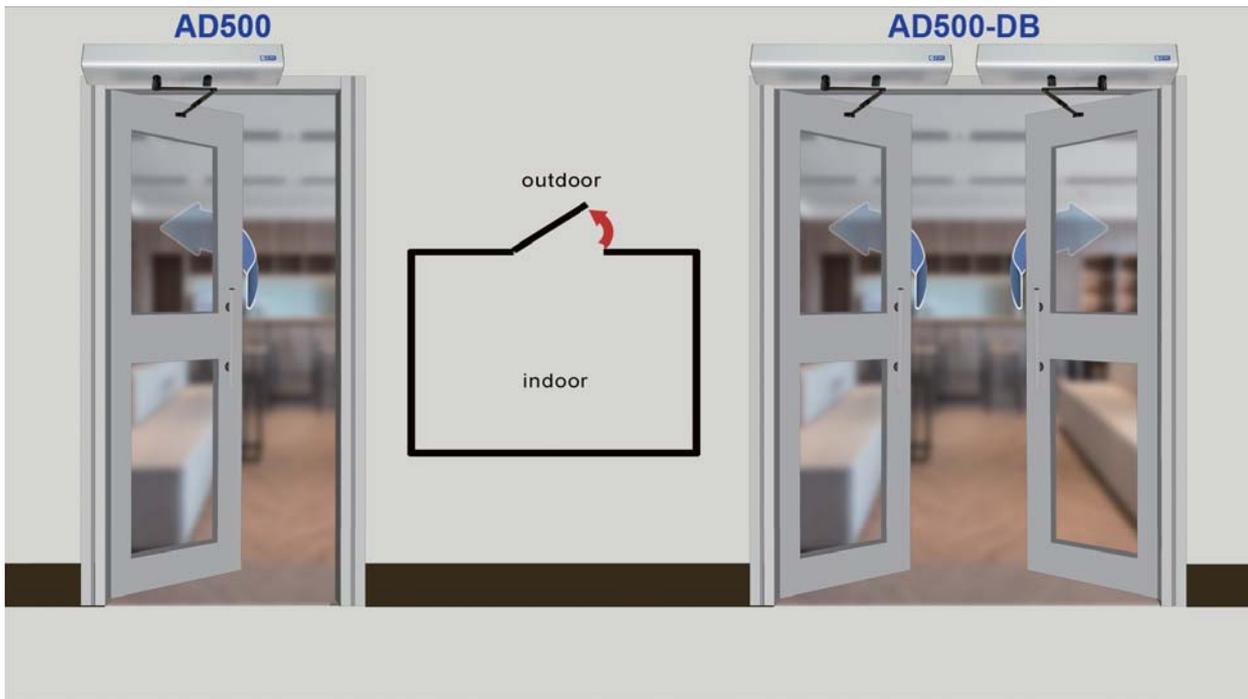
IEC 61000-4-4: 2012, IEC 61000-4-5:2014

IEC 61000-4-6: 2013, IEC 61000-4-8:2009, IEC 61000-4-11:2004

Pre-Setup Evaluation

For AD500 Automatic Door Operator

1. The AD500 is used for single door applications. For double door applications, use the AD500-DB (the interlock modules within 2 units of AD500 door operators connected in series).



2. When installing on outswing doors, there must be space at least 13 cm above the door header. When installing on inswing doors, there must be space at least 16 cm above the door header.



3. The required door leaf width is at least 75cm (minimum 80 cm wide door frame) at this time the electromagnetic lock can only be installed upright.

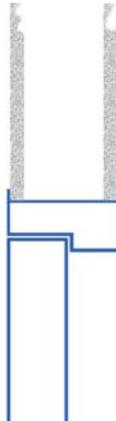


Pre-Setup Evaluation

For AD500 Automatic Door Operator



4. It is not recommended to install if the door height exceeds 280 cm or door weight exceeds 150 kg.



5. It is strongly recommended to install on concrete or brick walls. For wood plates or calcium silicate boards, add a piece of reinforced metal plate to hold the operator weight or prevent shaking when opening or closing the door.

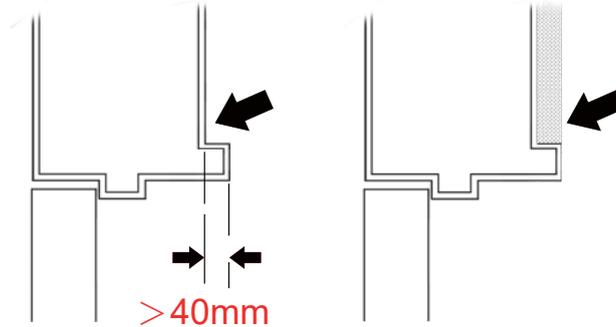


6. Note that this product cannot be installed on frameless glass doors or walls, sliding doors, and gates.

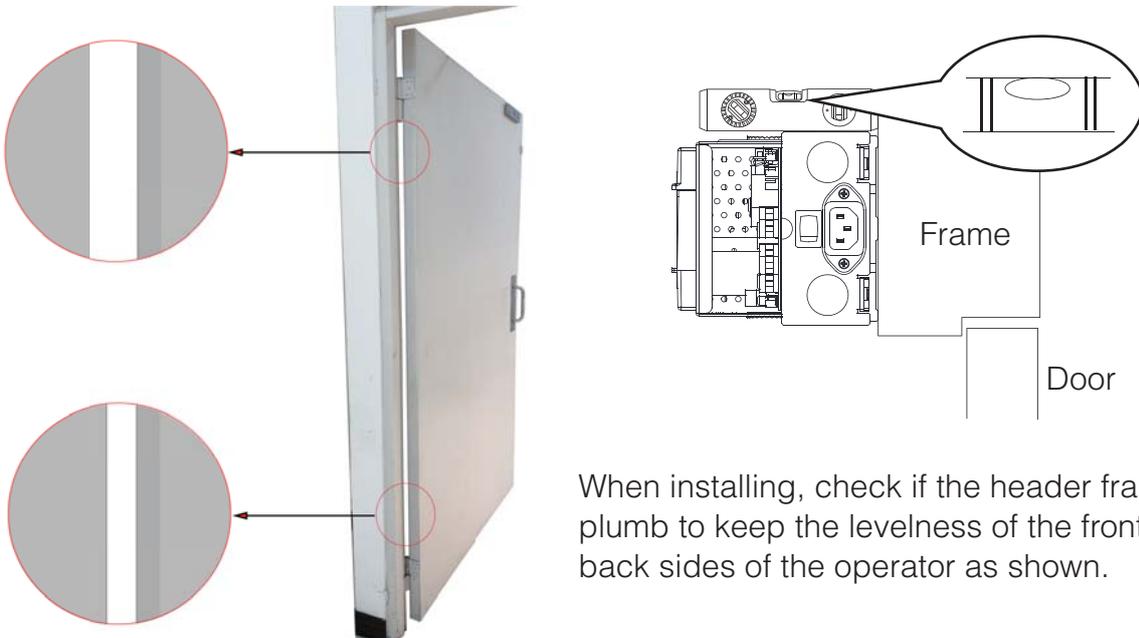
Pre-Setup Evaluation

For AD500 Automatic Door Operator

7. Install shaft extensions (DT-20/50/70) if the frame stop exceeds standard length (see measurement A and C on page 7). If the frame stop exceeds 40 mm length to contact with pivot post, add spacers to compensate for gaps and no shaft extensions are required.



8. For outswing applications: If the door frame and leaf depth (X) exceed 150 mm (see the illustration on page 6), the lengthen arm must be used. The maximum depth (X) of the lengthen arm does not exceed 300 mm.
9. For inswing applications, the door leaf and frame depth do not exceed 70 mm (see the illustration on page 7).
10. Check if the door moves smoothly and the hinges can carry the door load. If the door hinges are warped, adjust the hinges first and then install the door operator.



When installing, check if the header frame is plumb to keep the levelness of the front and back sides of the operator as shown.

The door leaf is not parallel to the frame as illustrated, meaning the hinges cannot hold the door weight and need to be fixed.

Pre-Setup Evaluation

For AD500 Automatic Door Operator

11. The existing floor hinges or mechanical door closer needs to be removed.
12. The existing mechanical latch needs to be removed.
13. The existing door handle needs to be removed. (when using this product, it is strictly forbidden to push or pull the door)



Pre-Setup Evaluation

For AD500 Automatic Door Operator



14. It is not recommended to install on the exterior doors or gates.



15. It is suggested to install the electromagnetic lock to prevent the door from being opened by force under wind load conditions or access control.



16. It is suggested to install the electromagnetic lock to prevent the door from being opened by force under wind load conditions or access control.

Safety Inspection Checklist

For AD500 Automatic Door Operator

Door Frame and Type Requirements

1. Installing on outswing doors: Requiring space more than 13 cm above the door header.
 Installing on inswing doors: Requiring space more than 16 cm above the door header.
2. Door leaf width 75 cm
3. Cannot be installed on glass walls, frameless glass doors, gates and sliding doors
4. Installing inside of the room (no worries about rain and humidity)
5. Door height does not exceed 280 cm
6. Door weight does not exceed 150 kg

Door Frame/Leaf Conditions

7. Concrete or brick walls
 Wood plate or calcium silicate board (with metal plate reinforced)
 Wood plate or calcium silicate board (without metal plate reinforced)
8. Door frame stop not exceeding 40 mm
 Door frame stop exceeding 40 mm (with spacers)
 Door frame stop exceeding 40 mm (without spacers)
9. Check door movement, hinges, and warped doors/frames
 Warped doors and hinges (needs to be modified)

Door/Frame Types and Compatible Products

10. Single door application
 Double door application (order AD500-DB)
 Double door application (order AD-500-DB and double operator cover)
11. Outswing door: Without frame stop (articulated standard arm installation)
 Outswing door: With frame stop, measurement A below 30 mm
(articulated standard arm installation)
 Outswing door: With frame stop, measurement A from 30 to 50 mm, requiring optional DT-20
 Outswing door: With frame stop, measurement A from 50 to 80 mm, requiring optional DT-50
 Outswing door: With frame stop, measurement A from 80 to 100 mm, requiring optional DT-70

Safety Inspection Checklist

For AD500 Automatic Door Operator

12. Inswing door: Without frame stop (sliding arm and track assembly installation)
- Inswing door: With frame stop, measurement C below 37 mm (sliding arm and track assembly installation)
- Inswing door: with frame stop, measurement C from 37 to 57 mm, requiring optional DT-20
- Inswing door: With frame stop, measurement C from 57 to 87 mm, requiring optional DT-50
- Inswing door: With frame stop, measurement C from 87 to 107 mm, requiring optional DT-70
13. Outswing door: Door and frame depth from 0 to 150 mm (articulated standard arm installation)
- Outswing door: Door and frame depth from 150 to 300 mm, requiring optional articulated lengthen arm
- Outswing door: Door and frame depth exceeding 300 mm (specific accessories)
14. Inswing door: Door and frame depth not exceeding 70 mm (sliding arm and track assembly installation)
- Inswing door: Door and frame exceeding 70 mm (specific accessories)
15. No wind load nor access controls
- Wind load or access control requirement - adding electromagnetic locks

Environmental Check

16. Without floor hinges (or mechanical door closer)
- With floor hinges (or mechanical door closer) - removed/disabled
17. Without mechanical latch
- With mechanical latch - removed/disabled
18. Without door handle
- With door handle - removed/disabled

For the better possible service, please provide the photo of door frame or leaf for our reference.