9000 SERIES

ANSI GRADE 1

ANSI GRADE 1
ANSI/BHMA A156.4
Series 2000, PT1
Exceeds 1,500,000 cycles with Backcheck

UL LISTED
UL10C Positive Pressure Rated. Conforms to UBC 7-2 (1997). (Uniform Building Code Standard)

Comply with ANSI A117.1

25-Year Warranty

BHMA CERTIFIED

Model

9000	Adjustable power size 1-6 with Back Check
9000/DA	Adjustable power size 1-6 with Back Check and Delay Action

Applications

- Heavy Duty Commercial model ideal for high traffic door such as schools, hospitals, and public institutions
- Same mounting hole pattern as CAL-ROYAL 900 (CTC 11-1/8" x 1-1/8"), ideal for renovations
- Tri-packed for all type applications
- Sex-bolts included for Metal Door mounting

Features

- Multi-size spring adjustable power size 1-6 Factory preset size 3
- Meet ADA
- Standard with adjustable Backcheck

Product Specification

Material	Aluminum alloy body, forged steel arm Heat treated forged steel piston Double Heat treated Steel pinion
Cover	Full plastic cover – standard
Valves	Triple valve control for Closing speed, Latching speed, and Back-check Staked valve for power adjustment
Arm & Brackets	Standard arm and parallel bracket included for different mounting demand
Screws	Self-tapping wood screws, machine screws, and sex-bolts
Finishes	Aluminum, Duronotic, and Gold

Optional Fuctions

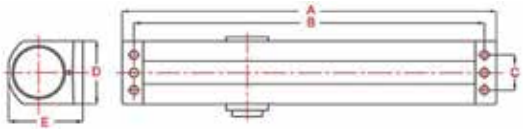
- Hold Open Arm (9001)
- Parallel Rigid Cush Arm (9002)
- Parallel Rigid Cush and Stop Arm (9003)
- Extended Forearm (9004)
- Parallel Rigid Arm (9005)
- Slide Track Arm (9006)
- Drop Plate (90DP-PA)

*** Special Order from the factory**

- Metal Cover
  Finish (BHMA): US3 (632), US4 (633), US26 (651), US32D (630)

Technical Dimensions

Series 9000	Size
A. Length of Closer Body	11-7/8"
B. Horizontal Mounting Holes	11-1/8"
C. Vertical Mounting Holes	1-1/8"
D. Height of Closer Body	2"
E. Projection from Door	2-3/8"



End View Front View

Accessories

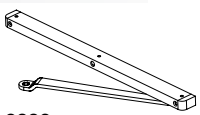
9001
Hold-open Arm
Stand for pull side & top jamb
Use with PA bracket for parallel arm mount

9002
Parallel Rigid Cush Arm
Auxiliary Stop in soffit shoe

9003
Parallel Rigid Hold Open Cush Arm
Hand control plunger hold open
Auxiliary stop in soffit shoe

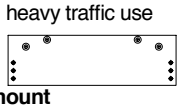
9005
Parallel Rigid Arm
Featured with solid steel main & forearm for extra heavy traffic use

9004
Extended Forearm
For Top Jamb with reveal greater than 4" and up to 8"



9006
Slide Track Arm
Featured with adjustable Hold Open Angle

HFW01 Flat Wrench for Hold Open Arm



90DP-PA
Size: 11-13/16" x 3-9/16"
Drop Plate –Parallel arm mount
Used to mount a closer on a top rail as narrow as 1-9/16" in height

90C
Standard Full Plastic Cover

1349
Sex-bolt with screw
For 1-3/4" standard Door Thick

PAB01
Parallel Bracket
For Hold Open Arm mounting
can also use for regular parallel arm application

BSS02
Blade Stop Spacer
Design to lower parallel arm shoe to clear 1/2" (13 mm) blade stop

ADVANTAGE®
by PHILADELPHIA HARDWARE GROUP

DOOR CLOSER

Philadelphia Hardware Group Inc. is presenting the finest **ADVANTAGE**® surface mounting door closers certified by BHMA including:

- Multi-size door closer: 9000, 8000, 6000, 6000S (slim cover), 4400 series.
- Standard size door closer: 4000, 3000, 2000 series.
- Multi-size Delay Action door closer: 8000/DA, 6000/DA, 6000S/DA series.

GENERAL INFORMATION

ANSI A156.4 – American National Standard for Door Controls-Closers

ADVANTAGE® Grade 1 Door Closers are certified by ANSI/BHMA A156.4.
ADVANTAGE® Grade 2 Door Closers are factory tested to meet or exceed ANSI Grade 2 required strength and performance.

UL Listed

All of **ADVANTAGE**® door closer series are UL listed, and conforms to Standards UL10C and UPC 7-2(1997).

Meet ADA Requirements

ADVANTAGE® door closer 9000, 8000, 6000, and 4400 series meet requirements of ANSI A117.1, ADA. Standards for Accessible Design, and NFPA 101.
Please note Door Closer with reduced opening force may not provide sufficient power to close a door.
Note: The information below concerning the Americans With Disabilities Act (A.D.A.) has been generated from ANSI/BHMA A117.1, the Federal Register, Part III, published by the Department of Justice, office of the Attorney General, 28CFR, part 36, and NFPA 101. The information listed here are requirements which must be met for door opening accessibility by the handicapped or disabled. Please refer to ANSI/BHMA A117.1, ADA standards and NFPA 101 for specific details.

- **Door Opening Width**
  Single-leaf Doorways shall have a clear opening of 32" minimum. Clear opening of doorways with swinging doors shall be measured from the face of door and stop with the door open 90°.
  Double-leaf Doorways should have at least one active leaf to meet the minimum opening criteria.
- **Door Opening Face**
  Door closers shall be adjusted so that from the open position of 90° the time required to move the door to an open position of 12° shall be 5 seconds minimum.
  The maximum force for pushing open or pulling open doors other than fire doors shall be as follows:
  1. Interior hinged door: 5 lbs.
  2. Exterior hinged door: 8.5 lbs.
  * 4400 series apply to interior hinged door only.
- **Fire Door (NFPA-101)**
  The force required to operate the door assembly in the direction of door leaf travel is not more than 30 lbf (133 N) to set the door leaf in motion and is not more than 15 lbf (67 N) to close the door assembly or open it to the minimum required width.
  Note: These forces shall be applied at the latch stile. The pound forces stated above should be reduced where possible to comply with exterior hinged door and interior hinged door requirements. However, door closing capability must not be compromised.
- **Door Closing Speed**
  ADA: The closing speed from an open position 70° to a point 3" from the latch will take at least 3 seconds.
  A117.1: Door closers shall be adjusted so that from the open position of 90° the time required to move the door to an open position of 12° shall be 5 seconds minimum.

Door Closers Handing are non-handed and suitable for left-opening or right-opening door.
All Weather Hydraulic Fluid used to ensure smooth operation under severe weather conditions, operation temperatures 130°F ~ -40°F (55°C ~ -40°C).
Finish Stock available Aluminum (BHMA 689) for all model, Gold (BHMA 696) for all model, Duranodic (BHMA 695) for all model, Satin Chrome (BHMA 652) for 8000 series


Aluminum


Duro (Duranodic)


Gold

ACCESSORIES

Drop Plate allows a door closer to be fitted on narrow top rail or narrow top frame door.
Most of the **ADVANTAGE**® door closers have different kinds of Drop Plates for installation requirements, see following pages in detail.

Hold Open Arm used when door is requiring for a clear opening doorways at 90˚ stop.
* Should not be used on Fire door application.

Parallel Rigid Cush Arm is a heavy duty arm with an auxiliary stop in soffit shoe to stop the door opening at a specific point. Apply to door where wall or floor stops are not appropriate. Parallel arm mounting application only.

Parallel Rigid Spring Cush Arm is Parallel Rigid Cush Arm with a Spring Stop in soffit shoe for abusive application.

DOOR CLOSER

ACCESSORIES

Parallel Rigid Hold Open Cush Arm is a heavy duty hold open arm featured with a plunger hold open to engage or disengage hold open by a handle on the arm. Auxiliary stop in soffit shoe to stop the door opening at a specific point. Parallel arm mounting application only.
* Should not be used on Fire door application.

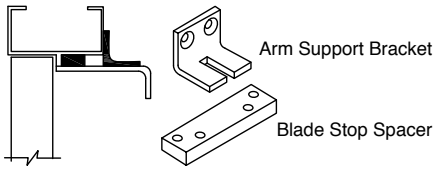
Parallel Rigid Hold Open Spring Cush Arm is Parallel Rigid Hold Open Cush Arm with a Spring Stop in soffit shoe for abusive application.
* Should not be used on Fire door application.

Parallel Rigid Arm is an extra heavy duty arm that is intended to use in heavy traffic areas. Parallel arm mounting application only.

Slide Track Arm with Hold Open Stop provides the smoothest lines available in a surface- mounted door closer. The design minimize projection and eliminate obtrusive arm angles. The arm geometry reduces door closer power efficiency by approximately 25% from that of a regular arm. * Using hold open stop is not code compliant on fire rated doors.

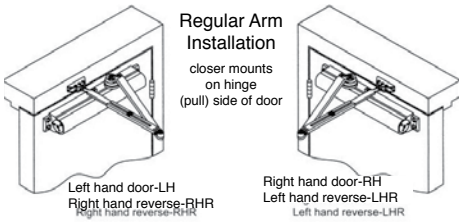
Blade Stop Spacer lowers parallel arm shoe to clear 1/2" (13mm) blade stop.

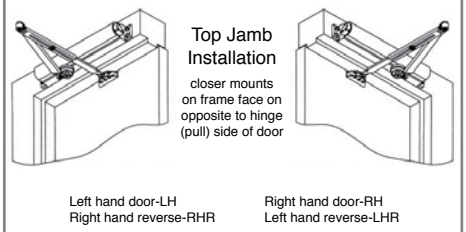
Arm Support Bracket provides anchor for fifth screw, to use with stop arms when reveal is less than 3-1/16" (78mm). (for 8000 door closer only)

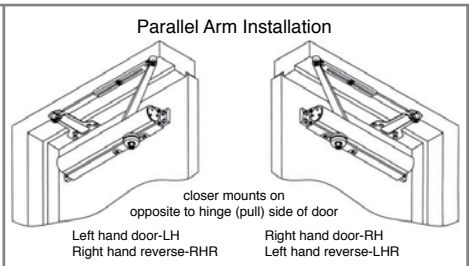


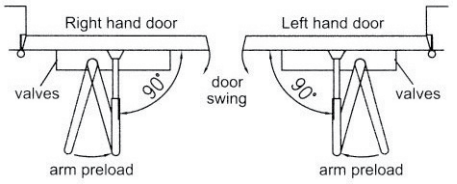
DOOR CLOSER APPLICATION

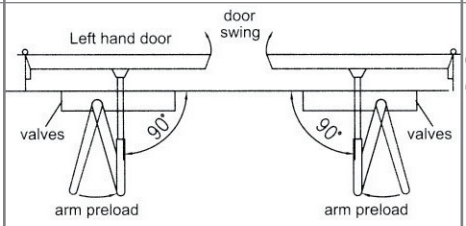
There are three basic methods of mounting surface door closers to the door and frame including regular arm, parallel arm and top jamb mounts. All **ADVANTAGE**® door closers are supplied standard with a tri-pack for mounting any of three types applications.

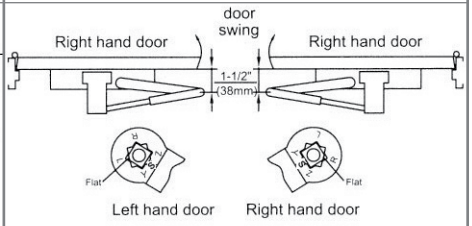












Use adjustable wrench to rotate spindle 45° counter-clockwise for right hand door or clockwise for left hand door. Place main arm on spindle so that the "R" (Right hand door) or "L" (Left hand door) lines up with the spindle flat. Secure main arm and spindle by tightening spindle bolt.

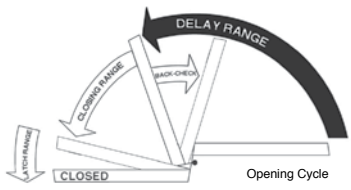
Regular Arm (Pull side)
Most power-efficient application
The Closer body is mounted on the hinge side of the door top rail.
The forearm is mounted to the frame face by a mounting shoe.
Arm projects at approximately a 90° angle away from the door.

Top Jamb (Push side)
More power-efficient than the parallel arm application
Applying to a closer with narrow top rail on a door.
The closer body is mounted to the frame face above the door, opposite the door hinge side.
The forearm is then mounted to the top rail of the door.

Parallel Arm (Push side)
Least power-efficient application
The closer body is mounted on the top rail of the door, opposite the hinge side of the door.
The forearm is mounted by a parallel arm bracket to the underside of the frame.
The arm is parallel to the door, which makes it less likely to be damaged.
* Top reveal should have enough space for using this application.

CLOSER ADJUSTMENT

ADVANTAGE® Door closers have hex wrench controlling valves for adjusting Closing speed and latch speed. Multi-size door closers have a nut for spring power adjustment, and additional valve for Backcheck. Delay Action control valve available with Delay Action model.



DOOR CLOSER

Closing speed & Latching speed are dual valve control for door closing speed.
Closing speed is the speed of door closing from full opening to approximately 10˚~5˚ of door closed position.
Latching speed is the speed from approximately 10˚~5˚ door opening to door closed position. Slow latch speed provides less door closing noise.

Backcheck slows down the door opening at approximately 70˚ in order to prevent damage to building and door frames.
The backcheck control valve provides a 20˚ adjustment (70˚ ~ 90˚) to set the optimum backcheck start point.
* Multi-size door closers are standard with Backcheck function.

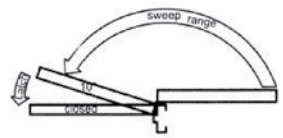
Delay Action is the 3rd control for closing speed adjustment.
It effective from full opening to approximately 70˚, and provides a slow closing speed. The closing time between 180˚ to 70˚ is at least 20seconds, and easily adjustable up to 1minutes. Closer with Delay Action provides sufficient time that allows people or the elderly to get through the door before it starts to close.

Unit adjustment

Closing speed controls (figure 1,2 and 6)
- Valve "S" controls sweep range
- Valve "L" controls latch range
- Valve "D" controls delayed action range

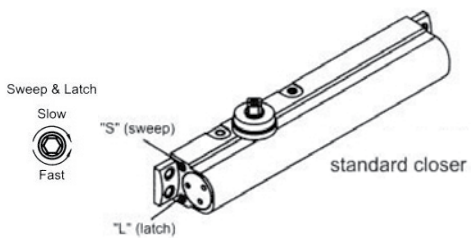
Opening door control (figure 4 and 5)
- Backcheck ("B") Valve controls the hydraulic resistance to door opening. NEVER close this valve completely- it is not to provide a positive stop

Closing speed controls Figure 1

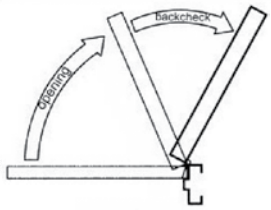


Standard Closing cycle

Closing speed controls Figure 2

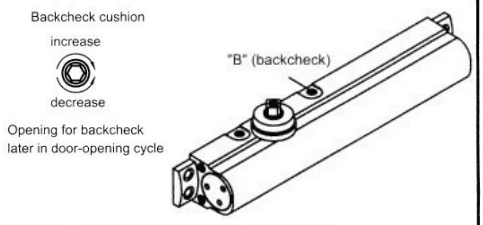


Opening door controls Figure 4



Opening cycle

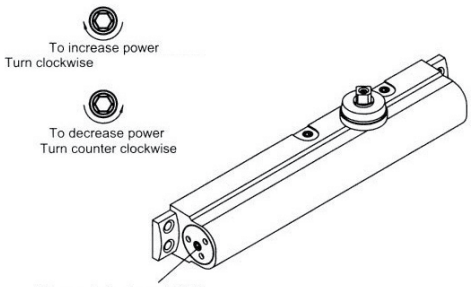
Backcheck Figure 5



(NEVER close backcheck valve completely)

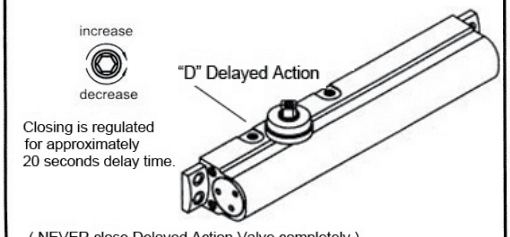
Closing power control (Figure 3)

Closing power control Figure 3



Delayed Action Control (Figure 6)

Delayed Action control Figure 6



(NEVER close Delayed Action Valve completely)

Multi-size Spring adjustment

Multi-size door closers are able to adjust the spring power to meet the power needs of the door.
Spring power of the closer can be increased by turning the power adjustment nut clockwise, vice versa.

Closer Size (Spring Power)

Recommended Maximum Door Size

Closer Size	Regular & Top Jamb			Parallel Arm		Door Weight (Lbs.)
	Interior	Exterior Swing-in (Pull Side)	Exterior Swing-out (Push Side	Interior Swing-out (Push side)	Exterior Swing-out (Push side)	
1	28”	N/A	N/A	N/A	N/A	33 ~ 66
2	36”	N/A	N/A	30”	N/A	66 ~ 99
3	42”	30”	36”	36”	30”	99 ~ 143
4	48”	36”	42”	42”	36”	143 ~ 187
5	54”	42”	48”	48”	42”	187 ~ 264
6	60”	48”	54”	54”	48”	264 ~ 330

* Multi-size door closers provide the spring power required to fit your door size and application.

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by PHILADELPHIA HARDWARE GROUP