

6000, 6000S SERIES

ANSI GRADE 1

ANSI GRADE 1

ANSI/BHMA A156.4

Series 2000, PT1

Exceeds 1,500,000 cycles with Backcheck



LISTED

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



Comply with ANSI A117.1

25-Year Warranty



Model

6000, 6000S

Adjustable power size 1-6 with Back Check

6000/DA, 6000S/DA

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

Applications

- Heavy Duty Commercial model ideal for high traffic door
- Versatile for new constructions, such as schools, hospitals, and public institutions
- Same mounting hole pattern as NORTON 8000 CTC 12" x 3/4", 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 – 6000 series
Valves	Triple valve control for Closing speed, Latching speed, and Back-check Delayed Action valve – Optional (Model: 6000/DA, 6000S/DA) 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 Functions

Wide choice of options for different applications

- Hold Open Arm (6001)
 - Parallel Rigid Cush Arm (6002)
 - Parallel Rigid Cush and Stop Arm (6003)
 - Extended Forearm (6004)
 - Parallel Rigid Arm (6005)
 - Slide Track Arm (6006)
 - Drop Plate (see Accessories)
 - * **Special Order from the factory**
 - Metal Cover (Full Cover only)
- Finish (BHMA): US3 (632), US4 (633), US26 (651), US26D (652), US32D (630)

Technical Dimensions

Series 6000, 6000S	Size	
A. Length of Closer Body	12-3/4"	
B. Horizontal Mounting Holes	12"	
C. Vertical Mounting Holes	3/4"	
D. Height of Closer Body	1-1/4"	
E. Projection from Door	2-1/8"	

6001 Hold-open Arm
Stand for pull side & top jamb
Use with PA bracket for parallel arm mount

6002 Parallel Rigid Cush Arm
Auxiliary Stop in soffit shoe

6003 Parallel Rigid Hold Open Cush Arm
Hand control plunger hold open
Auxiliary stop in soffit shoe

6005 Parallel Rigid Arm
Featured with solid steel main & forearm for extra heavy traffic use

HF01 Flat Wrench for Hold Open Arm

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

6004 Extended Forearm
For Top Jamb with reveal greater than 4" and up to 8"

6006 Slide Track Arm
Featured with adjustable Hold Open Angle

600S Standard Slim Plastic Cover

Accessories

60DP-ST
Size: 13-1/8 x 3-1/4"
Drop Plate – Pull Side, or Concealed Door Holder
Use for hinge side mount
Upside-down to mount where concealed door holder prevents normal door closer mounting
Plate require 2-7/16" minimum top rail

60DP-TJ
Size: 13-1/8 x 3-5/8"
Drop Plate – Top Jamb
Apply to low ceiling clearance between 1-1/2" ~ 1-3/4"
60DP-PAS
Size: 13-1/8 x 3-5/8"
Drop Plate – Parallel Arm
Plate require 2-7/8" minimum top rail
Cross reference: NORTON #3148

60DP-PA
Size: 13-1/8 x 5"
Drop Plate – Parallel arm mount
Used to mount a closer on a top rail as narrow as 3" in height

1344 Sex-bolt with screw
60C-F Standard Full Plastic Cover

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.

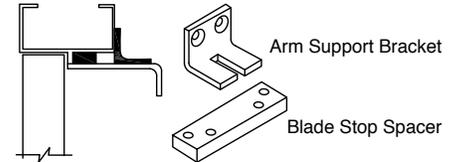
* Should not be used on Fire door application.

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)



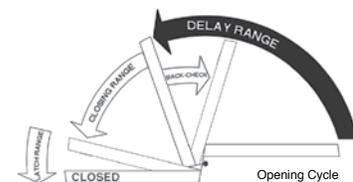
DOOR CLOSER APPLICATION

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.

<p>Regular Arm Installation closer mounts on hinge (pull) side of door</p> <p>Left hand door-LH Right hand reverse-RHR Right hand door-RH Left hand reverse-LHR</p>	<p>Top Jamb Installation closer mounts on frame face on opposite to hinge (pull) side of door</p> <p>Left hand door-LH Right hand reverse-RHR Right hand door-RH Left hand reverse-LHR</p>	<p>Parallel Arm Installation closer mounts on opposite to hinge (pull) side of door</p> <p>Left hand door-LH Right hand reverse-RHR Right hand door-RH Left hand reverse-LHR</p>
<p>Right hand door Left hand door</p> <p>valves door swing arm preload</p>	<p>Left hand door Right hand door</p> <p>valves door swing arm preload</p>	<p>Right hand door Left hand door</p> <p>valves door swing arm preload</p>
<p>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.</p>	<p>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.</p>	<p>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.</p>

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.

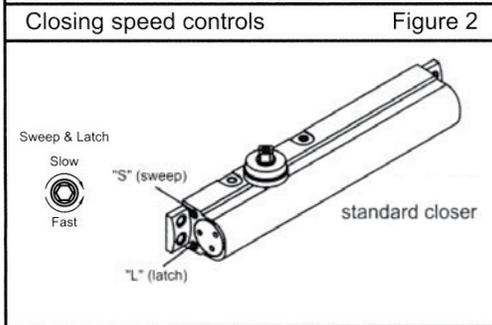
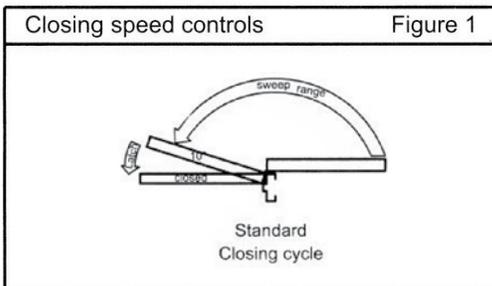
Multi-size Spring adjustment

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.

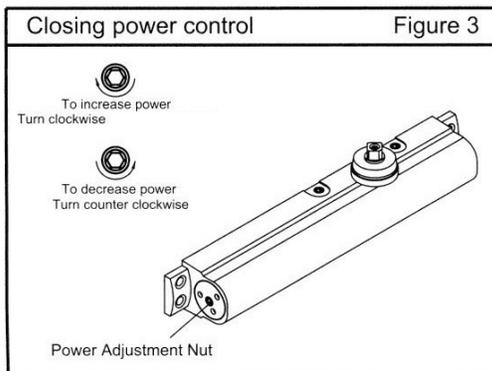
Unit adjustment

Closing speed controls (figure 1,2 and 6)

- Valve "S" controls sweep range
- Valve "L" controls latch range
- Valve "D" controls delayed action range

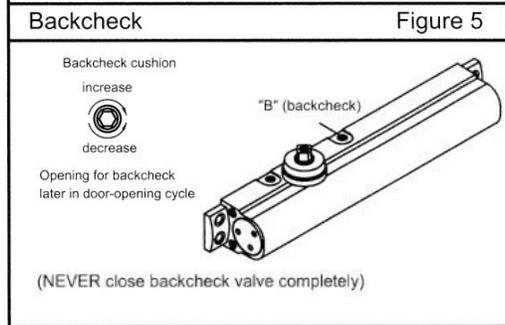
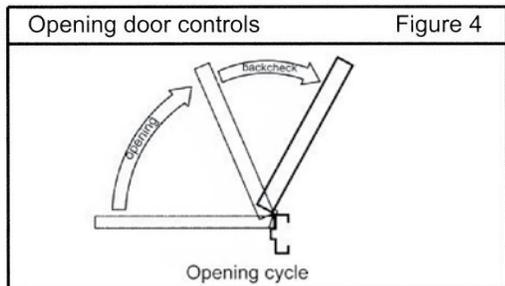


Closing power control (Figure 3)

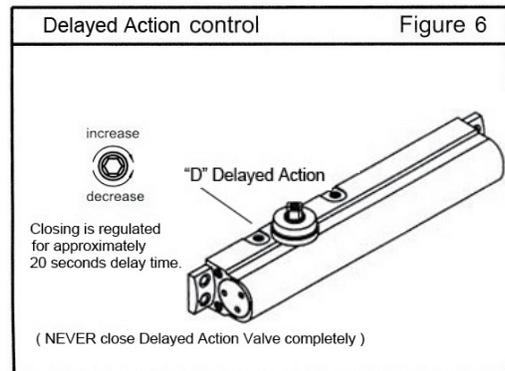


Opening door control (figure 4 and 5)

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



Delayed Action Control (Figure 6)



Closer Size (Spring Power)

Closer Size	Recommended Maximum Door Size					Door Weight (Lbs.)
	Regular & Top Jamb			Parallel Arm		
	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.