# ADVANTACE Door Closers



Always Striving.

# **DOOR CLOSER**

#### Philadelphia Hardware Group, Inc. is presenting the finest ADVANTAGE® surface mounting door closers

for your various application demands. There are

- Multi-size door closer: 9000, 8000, 6000, 6000S (slim cover), 5000, 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**<sup>®</sup> door closer 9000, 8000, 6000, and 4400 series meet ANSI A117.1 requirements for ADA. Please note Door Closer with reduced opening force may not provide sufficient power to close a door.

- 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°.
- 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.

#### Handing

All ADVANTAGE® Door closers are non-handed that are suitable for left-opening or right-opening door.

All Weather Hydraulic Fluid used to ensure smooth operation under severe weather conditions.



# 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.

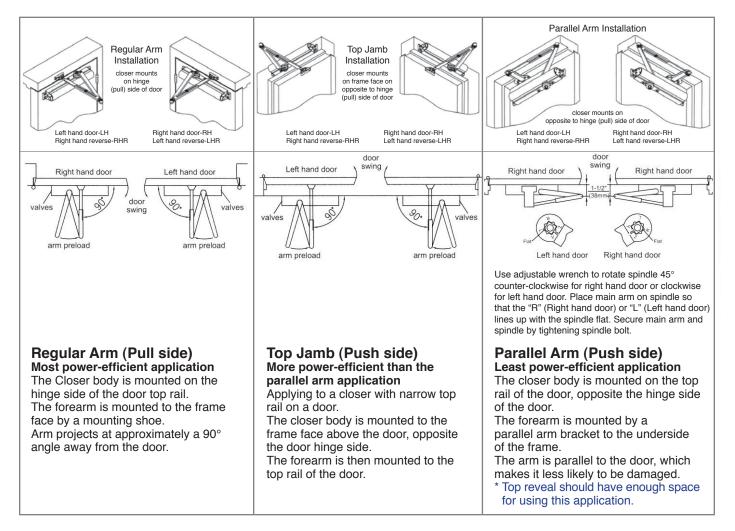
**Parallel Rigid Cush and Stop Arm** is a heavy duty hold open arm featured with a plunger hold open to engage or disengage hold open by a handle on the arm. Parallel arm mounting application only. \* Should not be used on Fire door application.



# **DOOR CLOSER**

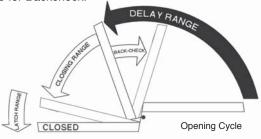
# DOOR CLOSER APPLICATION

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**<sup>®</sup> door closers are supplied standard with a tri-pack for mounting any of three types applications.



# **CLOSER ADJUSTMENT**

**ADVANTAGE**<sup>®</sup> 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.





# **OOR CLOSER**

Unit adjustment

• Valve "S" controls sweep range

• Valve "L" controls latch range

Closing speed controls (figure 1,2 and 6)

#### **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.

To decrease po

Power Adjustment Nut

### Closer Size (Spring Power)

		Recom	mended Maxiı	num Door Siz	ze	
Closer	ser Regular & Top Jamb		nb	Parall	Door Weight	
Size	Interior	Exterior Swing-in (Pull Side)	Exterior Swing-out (Push Side	Interior Swing-out (Push side)	Exterior Swing-out (Push side)	(Lbs.)
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.

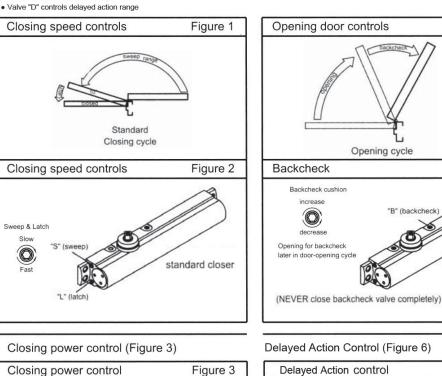
# by PHILADELPHIA HARDWARE GROUP

Opening door control (figure 4 and 5)

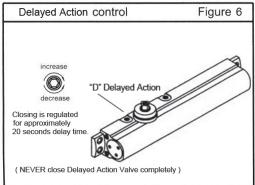
• Backcheck ("B") Valve controls the hydraulic resistance to door opening. NEVER close this valve completely- it is not to provide a positive stop

Figure 4

Figure 5



Delayed Action Control (Figure 6)



# **9000** SERIES

**ANSI GRADE 1** 

ANSI/BHMA A156.4-2000 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 **ANSI GRADE 1** 25-Year Warranty

#### Model 9000

Adjustable power size 1-6 with Back Check

# 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
- **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 &	Standard arm and parallel bracket included for different
Brackets	mounting demand
Screws	Self-tapping wood screws and machine screws
Finishes	Aluminum, Duronotic, and Gold



# **Optional Fuctions**

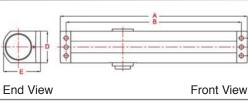
- Hold Open Arm (9001) •
- Parallel Rigid Cush Arm (9002)
- Parallel Rigid Cush and Stop Arm (9003)
- Extended forearm (9004)
- Sex-bolts (Metal door mounting)

#### \* Special order from the factory

- Delay Action
- Metal cover
  - Plated Finish: US3, US26, US26D

# **Technical Dimensions**

Series 9000	Size	
A. Length of Closer Body	11-7/8"	
B. Horizontal Mounting Holes	11-1/8"	6
C. Vertical Mounting Holes	1-1/8"	
D. Height of Closer Body	2"	
E. Projection from Door	2-3/8"	En



### Accessories



9001 Hold-open Arm Stand for pull side & top jamb Use with PA bracket for Auxiliary Stop in parallel arm mount soffit shoe

#### **PAB01**

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





Cush and Stop Arm stop in soffit shoe

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



90C



1348 Sex-bolt with screw For 1-3/4" standard Door Thick





# **8000** SERIES

# **ANSI GRADE 1**

ANSI/BHMA A156.4-2000 Series 2000, PT1

UL10C Positive Pressure Rated. Conforms to UBC 7-2 (1997). (Uniform Building Code Standard) Exceeds 1,500,000 cycles with Backcheck LISTED

Comply with ANSI A117.1

**25-Year Warranty** 

**ANSI GRADE 1** 

#### Model 8000 8000/DA

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

# **Applications**

- Extra 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 LCN4041, ideal for renovations
- Tri-packed for all type applications

# Features

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

### Product Specification

Material	Heavy Duty Cast Iron 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 cushion Delayed Action valve – Optional (Model: 8000DA) Staked valve for power adjustment
Arm &	Standard arm and parallel bracket included for different
Brackets	mounting demand
Screws	Self-tapping wood screws and machine screws
Finishes	Aluminum, Duronotic, Gold, and US26D-Satin Chrome

# **Optional Fuctions**

Wide choice of options for different applications

- Hold Open Arm (8001)
- Parallel Rigid Cush Arm (8002)
- Parallel Rigid Cush and Stop Arm (8003)

Accessories

Size: 12-1/4 x 3-9/16" Drop Plate - Pull Side

Size: 12-1/4 x 3-9/16" Drop Plate - Top Jamb

Size: 12-1/4 x 3-9/16' Drop Plate – Top Jamb

with flush ceiling

Plate require 2" minimum top rail

Use when frame face is less than 3 1/2" Use 8004 forearm if top reveal exceeds 2-9/16"

Hinge side mount when top rail is less than 3-3/4"

Top of head frame face in flush ceiling condition

Use 8004 forearm if top reveal exceeds 2-9/16"

Plate requires 1-3/4" minimum frame face

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- Extended forearm (8004)
- Drop Plate (see Accessories)
- Sex-bolts (Metal door mounting)

#### \* Special order from the factory

- Metal cover
- Plated Finish: US3, US26

80DP-ST

80DP-TJ

80DP-TG

80DP-PA

## **Technical Dimensions**

Series 8000	Size		OTEO.	<b>-</b>
A. Length of Closer Body	11"		C.	Fro
B. Horizontal Mounting Holes	5"	De la		
C. Vertical Mounting Holes	1"	I I I		
D. Height of Closer Body	2-3/4"	E-		
E. Projection from Door	2"	End View	• A	

8002



8001 Hold-open Arm Stand for pull side & top jamb Use with PA bracket for parallel arm mount

#### **PAB01**

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

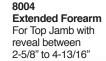


Parallel Rigid Cush and Stop Arm Hand control plunger stop in soffit shoe

**Extended Forearm** For Top Jamb with reveal between

#### 80C Standard Full Plastic Cover

1348 Sex-bolt with screw

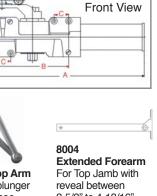


# Size: 12-1/4 x 5" Drop Plate – Parallel Arm

Use when top rail is less than 5-1/2", measured from the stop Plate requires at least 2-1/2" top rail



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# 5000, 60005 SERIES

# **ANSI GRADE 1**

**ANSI GRADE 1** 

ANSI/BHMA A156.4-2000 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

Full Cover

Slim Cover

#### Model 6000, 6000S 6000/DA, 6000S/DA

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

## Applications

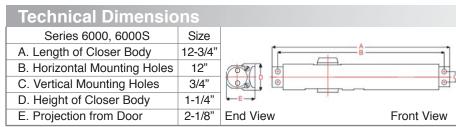
- Heavy Duty Commercial model ideal for high traffic door Versatile for new constructions, such as schools, hospitals, and public institutions
- Same mounting hole pattern as NORTON 8000 CTC 12" x 3/4", ideal for renovations
- Tri-packed for all type applications

### Features

- New upgraded design from year 2009 Multi-size spring adjustable power size 1-6, Factory preset size 3
- Meet ADA
- Standard with adjustable Backcheck

#### Product Specification

Aluminum alloy body, forged steel arm Heat treated forged steel piston
Double Heat treated Steel pinion
Full plastic cover – 6000 series
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
Standard arm and parallel bracket included for different
mounting demand
Self-tapping wood screws and machine screws
Aluminum, Duronotic, and Gold
-



6001 Hold-open Arm

Stand for pull side & top jamb Use with PA bracket for parallel arm mount

6002

Parallel Rigid

Auxiliary Stop in

**Cush Arm** 

soffit shoe

**PAB01** Parallel Bracket for Hold Open Arm mounting can also use for regular

parallel arm application 1348

Sex-bolt with screw

6003
Parallel Rigid 🔍
Cush and Stop Arm
Hand control plunger
stop in soffit shoe

60C-F Standard Full Plastic Cover

60C-S Standard Slim Plastic Cover

by PHILADELPHIA HARDWARE GROUP

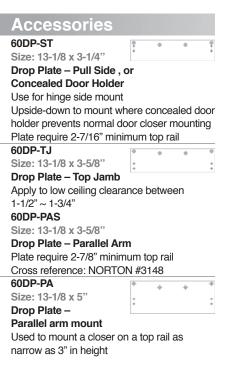


**Optional Fuctions** 

- 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)
- Drop Plate (see Accessories)
- Sex-bolts (Metal door mounting)

#### \* Special order from the factory

- Metal cover (Full Cover only)
- Plated Finish: US3, US26, US26D



# )()() **UU** SERIES 4

Adjustable power size 3-6 with Back Check

Adjustable power size 1-4 with Back Check

# **ANSI GRADE 1**

ANSI/BHMA A156.4-2000 Series 2000, PT1

UL10C Positive Pressure Rated. Conforms to UBC 7-2 (1997). (Uniform Building Code Standard) Exceeds 1,500,000 cycles with Backcheck LISTED

4400 Series Comply with ANSI A117.1 **25-Year Warranty** 

**ANSI GRADE 1** 

# Model

5000 4400

# Applications

- Heavy Duty Commercial model, ideal for high traffic door Versatile for new constructions, such as schools, hospitals, and public institutions
- Universal mounting hole pattern Size 4: CTC 9-1/16" x 3/4"
- Tri-packed for all type applications

### Features

- Multi-size spring adjustable power size 3-6, factory preset size 4 Multi-size spring adjustable power size 1-4, factory preset size 3
- 4400 meets ADA, Barrier Free interior
- Standard with adjustable Backcheck

### Product Specification

l		
	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 and machine screws
	Finishes	Aluminum, Duronotic, and Gold

### Technical Dimensions

J						
	Series 5000, 4400	Si	ze		н А	•
	A. Length of Closer Body	9-3/4"	9-3/4"		B	
	B. Horizontal Mounting Holes	9-1/16"	9-1/16"		@	9
	C. Vertical Mounting Holes	3/4"	3/4"			
	D. Height of Closer Body	1-3/4"	1-3/4"	E	$\smile$	
	E. Projection from Door	2-7/8"	2-7/8"	End View		Front View

### Accessories

# 4001

Hold-open Arm Stand for pull side and top jamb



ol Use with PA bracket for parallel arm mount

**PAB02** Parallel Bracket for Hold Open Arm mounting can also use for regular parallel arm application



1348 Sex-bolt with screw For 1-3/4" standard Door Thick



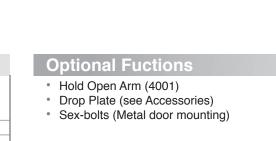
40DP-TJ



Drop Plate - Top Jamb low ceiling clearance For use when ceiling clearance is between 1-3/4" and 2-5/8" Cross reference: NORTON #1687 40DP-PA Size: 9-3/4" x 3-1/2"

**Drop Plate – Parallel** arm mount Used to mount a closer on a top rail as narrow as 2-5/8" in height

by PHILADELPHIA HARDWARE GROUP



# 4000, 3000, 2000 SERIES ANSI GRADE 2

**GRADE 2** 

Factory tested to meet ANSI Grade 2 durability LISTED

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

**10-Year Warranty** 

# Model

ard power size 4 ard power size 3 ard power size 2

- Applications
  Medium and Light Duty model Medium Duty 4000 Light Duty 3000, 2000
- Universal mounting hole pattern Size 4: CTC 9-1/16" x 3/4" Size 3: CTC 8-3/16" x 3/4" Size 2: CTC 6-5/8" x 3/4"

### **Product Specification**

Material	Aluminum alloy body, forged steel arm Heat treated forged steel piston Double Heat treated Steel pinion				
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	Wood screws and machine screws				
Finishes	Aluminum, Duronotic, and Gold				

### **Optional Fuctions**

- Hold Open Arm (3001, 4001)
- Drop Plate (See Accessories)
- Sex-bolts (Metal door mounting)
- Full plastic cover, available for 4000 series • only (40C)

<b>Technical Dimensio</b>	ns				
Series 4000, 3000, 2000		Size			A
A. Length of Closer Body	9-3/4"	8-3/4"	7-5/16"	1	B•
B. Horizontal Mounting Holes	9-1/16"	8-3/16"	6-5/8"		
C. Vertical Mounting Holes	3/4"	3/4"	3/4"		
D. Height of Closer Body	1-3/4"	1-3/4"	1-3/4"	← E →	
E. Projection from Door	2-7/8"	2-7/8"	2-5/8"	End View	Front View



#### 4001

Hold-open Arm For 4000 Series Pull side and top jamb Use with PA bracket for parallel arm mount

**PAB02** 

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

300	)1	
Hol	ld-oper	<mark>ו Arm</mark>
Eor	2000	Porioc



or 3000 Series Pull side and top jamb Use with PA bracket for parallel arm mount

40C For 4000 Series Standard Full **Plastic Cover** 



1348 Sex-bolt with screw For 1-3/4" standard Door Thick

40DP-TJ For 4000 Series 💊 🔍 🔹
Size: 9-3/4" x 2-9/16"
Drop Plate – Top Jamb
low ceiling clearance
For use When ceiling clearance is between
1-3/4" and 2-5/8"
40DP-PA For 4000 Series 💿 🔍 💿
Size: 9-3/4" x 3-1/2"
Drop Plate –Parallel
arm mount
Used to mount a closer on a top rail as
narrow as 2-5/8" in height
30DP-PA For 3000 Series
Size: 3-1/2" x 8-3/4"
Drop Plate – Parallel arm mount
Drop Flate – Faraller ann mount
20DP-PA For 2000 Series



# **ORDER INFORMATION**

### **Product Availabilities**

Carles	Development	Desta	Function Availability			Accessories					
Series Power Size		Duty	Back Check	Delay Action	Hold Open with Hold Open Arm	Parallel Rigid Cush Arm	Cush & Stop Arm	Drop Plate	Sex- Bolt	Plastic Cover	
9000	Adjustable No. 1-6	Heavy			•	•	٠		•		
8000	Adjustable No. 1-6	Extra Heavy			٠	•	٠	•	•	•	
8000/DA	Adjustable No. 1-6	Extra Heavy		•	٠	•	٠	•	•	•	
6000	Adjustable No. 1-6	Heavy			•	•	•		•	•	
6000S	Adjustable No. 1-6	Heavy			•	•	•		•	•	
6000/DA	Adjustable No. 1-6	Heavy			•	•	•		•	•	
6000S/DA	Adjustable No. 1-6	Heavy			•	•	•		•	•	
5000	Adjustable No. 3-6	Heavy			•				•	•	
4400	Adjustable No. 1-4	Heavy			•				•	•	
4000	No. 4	Medium			•				•	•	
3000	No. 3	Light			•				•		
2000	No. 2	Light							•		

Standard or optional

• Special order from the factory, allow for longer lead time. Please call for more information

<b>ADVANTAGE®</b> Door Closers	Power Size		Product Code				
Adjustable Power with Back-C	heck (BC)		Aluminum	Duro	Gold		
9000	No. 1-6 BC	F	609910	609911	609912		
8000	No. 1-6 BC	F	608810	608811	608812		
6000	No. 1-6 BC	F	606710	606711	606712		
6000S (Slim Cover)	No. 1-6 BC	F	606730	606731	606732		
5000	No. 3-6 BC		605110	605111	605112		
4400	No. 1-4 BC	F	604410	604411	604412		
Adjustable Power with Back-Che	eck (BC) and Dela						
6000/DA	No. 1-6 BC DA	F	606740	606741	606742		
6000S/DA (Slim Cover)	No. 1-6 BC DA	F	606750	606751	606752		
Adjustable Power with Delay A	ction (DA)						
8000/DA	No. 1-6 DA	F	608840	608841	608842		
Fixed Power Size							
4000	No. 4		604010	604011	604012		
3000	No. 3		603300	603301	603302		
2000	No. 2		602200	602201	602202		



# **CROSS REFERENCE**

<b>ADVANTAGE®</b>	9000	8000	6000	6000S	5000/4400	4000	3000	2000	
Spring Power Size	1-6	1 – 6	1 – 6	1 – 6	3 - 6/1 - 4	4	3	2	
CTC Hole Pattern	11-1/8" x 1-1/8"	5" x 2-1/4" x 1"	12" x ¾"	12" x ¾"	9-1/16" x ¾"	9-1/16" x ¾"	8-3/16" x ¾"	6-5/8" x ¾"	
ARROW			5016N		936N/DC214	DC204 • DC203			
CAL-ROYAL	N900-PBF	CR441	CR801	CR801S	300	740	730	• 720	
						440-FP	430-P	<b>420-P</b>	
CORBIN/	• DC6200	DC8000	DC6200			4604	• 4603	• 4602	
RUSSWIN	• DC3200		DC3200						
CRL	PR74BC	PR90			• PR80/PR82BF	DC54	DC53	DC52	
					PR80 Size 2-5	Size 4	Size 3	Size 2	
DESIGN		416	316		116	100	100	100	
HARDWARE									
DORMA		<b>e</b> 8916	8616		• 7400	• 7304	• 7303		
						• 7204	• 7203		
FALCON		SC70	SC81	SC80	• SC60/SC61	SC64	SC93		
DOR-O-MATIC					SC60 Size 2-5	SC94			
GENERAL LOCK		C900	C7500	C7300	• C5025/C5014				
					C5025 Size 2-5				
GLOBAL	• TC600	TC4300	TC500	TC400	TC200	TC204	TC2203	• TC302	
DOOR CONTROL								• TC2202	
HAGER		5100	• 5200		5300	5400	• 5400	• 5400	
			Size 2-5						
INTERNATIONAL	• 9000	44CI	5000		8050	854	853	• 852	
DOOR CLOSER						• 754	753	• 752	
						654	653	652	
LCN		4040			• 1260				
					Size 1-5				
NORTON		• 7500	8501	8301	1600				
PDQ		7100	5300		1100/3100	1100/3100			
Manufacturing									
SARGENT	• 1431	• 281	1331		1130	1134			
STANLEY	D3550/D3551	D4550/D4551			D1650/D1651				
					D1650 Size 2-5				
S.PARKER	900BC				• BF900	534	533	• 532	
					814BC				
TAYMOR	1900				• 800/800BF	604	• 603	602	
					800 Size 2-5				
TELL	• 700	900	800		600	500			
YALE		4400	3501	3301	50	• 5104	• 5103	• 5102	
			YMDC2501		YMDC1101				

• The same mounting hole pattern with similar application • Different mounting hole pattern in the same power size All brand names & trademarks used are properties of their respective owners



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