



the engineer's choice

Yale® 50 Series Closers are designed to fit almost any application and are the choice of engineers worldwide. They are ideal for use with aluminum store front doors and frames, yet they also complement wood or metal door installations. Non-handed, the 50 series is available as sized or multi-sized units and offers tri-packed packaging on standard non-hold open and hold open closers.

This UL listed, Grade 1 closer has a proven history of quality and tradition. With a variety of plates, brackets, precise valve adjustment and a complete range of arms, these closers can be used on retail stores, warehouses, restaurants, garages, or manufacturing and utility buildings.

standard features

- Non-handed
- Tri-packed (regular arm, top jamb and parallel arm installations)
- Rack-and-pinion design
- Cast aluminum body
- 1-3/8" (35mm) diameter piston
- 5/8" (16mm) diameter pinion journals
- Standard, separate and independent, latch, sweep and backcheck intensity valves
- 2-7/8" (73mm) projection
- All standard arm applications allow doors to swing 180°, conditions permitting
- 10-year limited warranty
- Staked valves

optional features

- Delayed action (in lieu of backcheck). Specify 51DA or 51BFDA.
- Corrosion-resistant model (non-hold open only). Specify 51S (not available tri-packed)
- Molded plastic covers (suffix P)
- Heavy-duty arms: Parallel Rigid, Holder/Stop, Holder/Stop Spring and UNI Stop™

	50BC	51	51BF
Sized springs 2,3,4,5,6 with no power adjustment	X		
Adjustable spring sizes 3 through 6		X	
Adjustable spring sizes 1 through 4 (ADA compliant)			X
Delayed action option with pressure relief valve (in lieu of backcheck)		X	X

finishes

Description	Specify (BHMA) Designation	Complements the following finishes	Old Designation
Aluminum	689	628, 625, 629, 630, 651, 652	SB
Statuary Bronze	690	640, 613	STAT
Dull Bronze	691	612, 637, 639	BL
Black	693	315	315
Medium Amber	694	312	312
Gold	696	605, 606, 632, 633	GB
Prime Coat (Beige)	600*	—	SRI

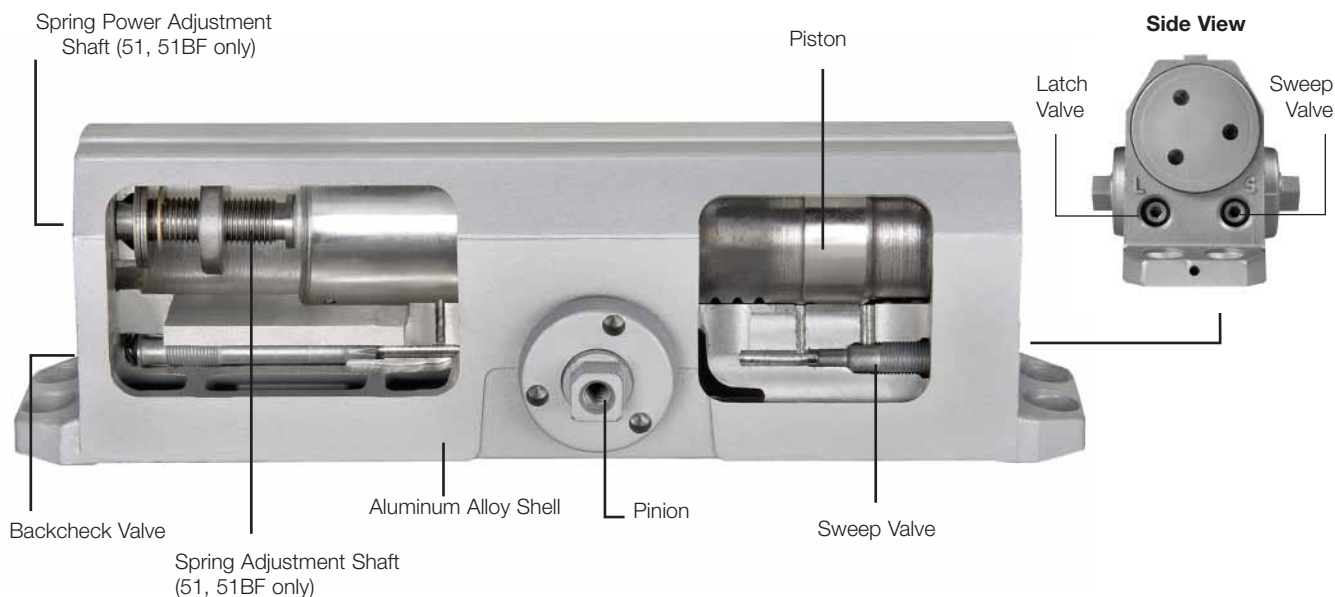
***600 is a special rust-inhibiting prime coat. Closers can be ordered prime coat only (specify closer x 600). An additional charge applies if finish coat is required over prime coat (ex: 51 x 600 x 689).**

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overview

cutaway view



Spring omitted for illustration purposes

compliance standards

The series 51BF door closers are designed to comply with requirements of the Americans with Disabilities Act (A.D.A.) and ANSI standard A117.1. All series 50BC/51(BF) are ANSI/BHMA A156.4, Grade 1 certified. All Yale® series 50BC/51(BF) closers with non-hold open arms are listed by Underwriters' Laboratories for labeled fire doors. This includes compliance to UL10C and UBC-72 (1997) for 3-hour assemblies. These products are manufactured in a certified ISO 9001 facility. These closers are also listed by New York City Materials and Equipment Acceptance Division.

CAUTION: Door Closers for Low Opening Force Applications:

Door closers installed in opening required to meet the requirements of The American with Disabilities Act or ANSI standard A117.1, when adjusted to meet those requirements, may not provide adequate closing power to dependably close and latch the door.

fasteners

Type	Description	Arm							
		RA	PA	TJ	Low Profile	PR	Holder/Stop Holder/Stop Spring	UNI	UNI-J
DOOR									
SDST	Self Drilling Self Tapping	S	S	S	S	O	O	O	O
MS	Machine Screw	S	S	S	S	S	S	S	S
SN	Sleeve Nut	O	O	O	O	S	S	S	S
TBGN	Thru Bolts & Grommet Nuts	O	O	O	O	O	O	O	O
SMS	Sheet Metal Screws (Wood)	O	O	O	O	O	O	O	O
FRAME									
SDST	Self Drilling Self Tapping	S	S	S	S	S	S	S	S
MS	Machine Screw	S	S	S	S	S	S	S	S
SMS	Sheet Metal Screws (Wood)	O	O	O	O	O	O	O	O

S = standard; O = optional

SN are for use on unreinforced hollow metal doors or to prevent any hollow metal door from collapse/dimpling. They can also be used for thru bolting on wood doors. SN are supplied for 1-3/4" (44mm) thick doors unless specified for 1-3/8" (35mm) or 2-1/4" (57mm) thick doors.

TBGN are an alternative to SN for wood doors. TBGN are supplied standard for 1-3/4" (44mm) thick doors. They can be specified for 1-3/8" (35mm) thick doors.

SMS - when specified, closer will be packed with sheet metal screws for the door **AND** sheet metal screws plus machine screws for the frame.



features

standard features

Aluminum Alloy Housing

Closer bodies are constructed of a special aluminum alloy, carefully selected to accommodate interaction with steel components and operating conditions.

Rack & Pinion Operation

Provides a smooth constant control of the door through its full opening and closing cycle. 180° door swing can be achieved when door, frame, hardware and arm function do not limit door swing.

Non-handed

With few exceptions all series 50BC and series 51 door closers are non-handed and can be installed on either right- or left-hand swing doors. Pinion shaft extends vertically through the closer body in both directions. Some options, (such as Parallel Rigid Hold Open Arms) will require that the hand of the closer be specified.

Tri-packed

50BC/51(BF) comes with screws, brackets & soffit plate to allow for regular, top jamb, & parallel arm installations.

Sweep Speed Control Valve

Allows adjustment of door's speed from the door's full open position down to approximately 10° from the closed position.

Latch Speed Control Valve

Allows adjustment of door speed from approximately 10° down to the door's fully closed position.

Adjustable Backcheck Cushion Valve

Provides control of the door in the opening cycle, beginning at approximately 75° of door opening. It slows/cushions the door opening, when the door is forcibly opened beyond its pre-adjusted opening speed limits.

Closer Fluid

All door closers are supplied with a temperature stable, multi-viscosity fluid. This fluid will permit the door closer to perform within a wide temperature range: from very high to as low as -40°F.

Warranty

These closers carry a limited ten-year warranty against defects and a limited lifetime warranty on the aluminum housing.

Door Closer Power Options

Series 50BC Sized Door Closer

Available in five different power sizes (2, 3, 4, 5 or 6). Outlined in ANSI/BHMA specification A156.4. Spring power is not adjustable.

Series 51 Multi-Sized Door Closer

Adjustable through the power range of sizes 3 through 6, as outlined in ANSI/BHMA specification A156.4.

Series 51BF Multi-Sized Door Closer

Adjustable through the power range of sizes 1 through 4 to comply with the opening force requirements as outlined in the Americans with Disabilities Act (A.D.A.) and ANSI A117.1 for interior doors.

optional features

Corrosion Resistant Door Closer

The series 51S and 51BFS door closers are available for use where corrosive conditions exist. This series is provided with zinc diecast adjustment valves, a 440 grade stainless steel pinion shaft, an all-aluminum body and bronze closer arm bushings; all other components and fasteners are of 302/303 grade stainless steel. This product is available for standard regular arm, top jamb and parallel arm, non-hold open, applications only. Not tri-packed. "P" or "J" prefix required for parallel arm and top jamb applications.

Optional Molded Cover

Molded of high impact U.L. listed material that covers the entire closer body assembly. This cover is non-handed for regular and parallel arm applications. Suffix "P" to catalog number. Not designed for top jamb applications.



features

optional features - delayed action

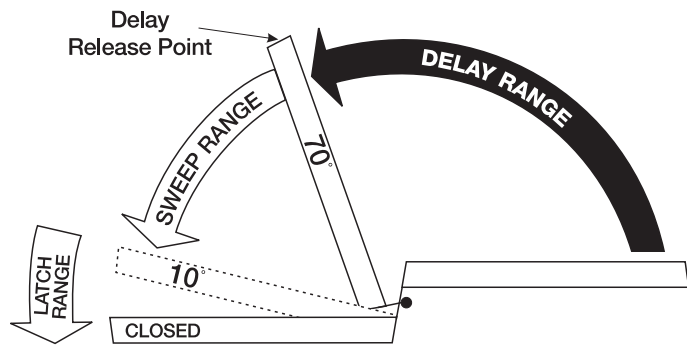
Adjustable Delayed Action Closing

An optional hydraulic feature that adds a third speed range to the closing cycle. This feature becomes effective when the door is opened and released at any point beyond 70°. The amount of time delay depends upon the combination of the angle of door release and valve adjustment. The valve can be adjusted with a 1/8" (3mm) hex key from no delay time up to maximum delay times of:

Door Opened and Released at	Approximate Time of Delay Cycle
180°	4-5 minutes
120°	2-3 minutes
90°	25-30 seconds

Pressure Relief Safety Valve

The delayed action hydraulic system contains a pressure relief valve. Any time the door is forced toward the closed direction while it is in the closing cycle, the valve will open and permit the door to close. This prevents damage to door, frame and closer.



Suggested Applications

Delayed Action closing allows slow-moving traffic to clear the opening before the door closer's normal closing cycle begins. This feature can be helpful in health care facilities such as hospitals and nursing homes. It provides sufficient time for persons on crutches or in wheelchairs to pass through a door without concern of it closing. At the same time, it can accommodate the facility's staff with movement of food service carts, beds, and other wheeled traffic.

Use of delayed action closers on many doors throughout industrial and commercial buildings can also assist the flow of traffic. Locations where additional time to clear the opening is advantageous are doors between office and factory/warehouse facilities, doors to workshops or laboratories, doors to kitchen and food processing areas, etc.

optional features - arms

Non-Hold Open

Self-closes door every time door is opened. Auxiliary stop (by others) required except when using the Holder/Stop, Holder/Stop Spring or Uni Stop™ Arms.

Hold Open

Achieved by means of friction or ball and detent/roller. Friction hold open has a range of 90° to 180° using template location and mechanical adjustment. Ball and detent or roller hold open is effective in a range of 85° to 110°.

Hold open arm door closers are not permitted to be used on fire door assemblies.

Arm Function	Regular Arm, Top Jamb, Parallel Arm	Parallel Rigid Arm	Holder/Stop Parallel Arm	Holder/Stop Spring Parallel Arm	Uni Stop™ Parallel Arm	Uni Stop Top Jamb	Low Profile Regular Arm, Parallel Arm
Non-Hold Open	✓	✓	85° to 110°	85° to 110°	85° to 110°	85° to 110°	✓
Hold Open	90° to 180°	85° to 180°	85° to 110°	85° to 110°	85° to 110°	85° to 110°	N/A

✓ = 180° trim and template permitting



special function door closers

series 50BC special function door closers

Telephone Booth Operation

Closer holds the door to the telephone booth open at 5° from the closed position. This prevents the light switch from being activated and allows the booth to be ventilated. It also indicates to users that the booth is unoccupied. Available in size 2 only, for regular arm or top jamb application only.

Coupon Booth Hold Open

Most commonly used on doors to safe-deposit box inspection cubicles. Closer holds the door to the booth open at 15° to indicate that the booth is available for use by a safe-deposit box renter. When the door is opened beyond 70°, the closer will close the door and engage the lock, providing the occupant with the desired privacy.

Available in sizes 2 and 3 only for regular arm, top jamb or parallel arm application. Specify hand.

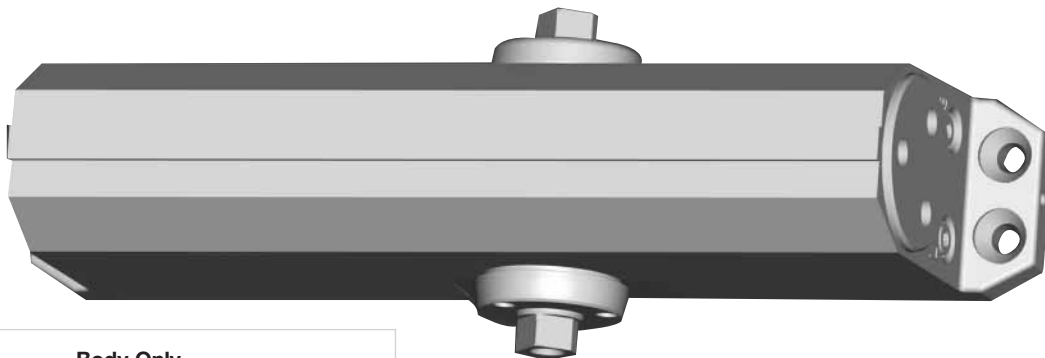
Hospital Hold Open

Closer will hold door open at approximately 15° for ventilation, 45° for observation and beyond 90° for full access.

Closer is supplied with a standard hold open arm for the beyond 90° hold open position. Available in sizes 3 and 4 only for regular arm, top jamb or parallel arm application. Specify hand.

accessories

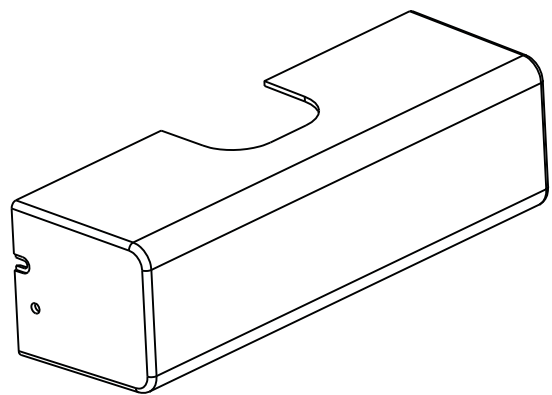
door closer body assemblies



Body Only (Standard)	
5*BCLAP	Sized Closer
51LAP	Multi-sized
51BFLAP	Barrier Free
51SLAP	Stainless Steel

LAP = Less All Parts

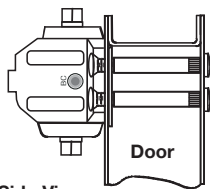
* Specify closer size. Pinion cap and mounting screws supplied standard.



fasteners

Steel Door Application

Sex Nut / Sleeve-Nut : "SN" (4 per pack) or
Sex Nut / Sleeve-Nut & Screw: "SNB" (4 per pack)



Side View

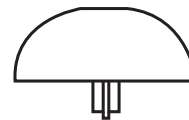
Door	SN's	SNB's
1-3/4"	SN-134	SNB134-38
2"	SN-200	SNB200-38
2-1/4"	SN-214	SNB214-38
S.S. SNB's 1-3/4"	SN-134SS	SNB134SS-38

Cover (optional) - specify 50P

Dimensions (RA and PA applications):

2-7/8"(73mm) height x 3-1/16"(78mm) deep x
9-7/8"(251mm) long

To order with closer use "P" suffix; i.e. 54BCP.

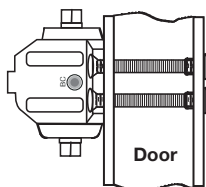


1639 Pinion Cap

Aluminum and Wood Door Application

(Aluminum Door Shown)

Through-Bolt & Grommet Nut : "TBGN" (4 per pack)



Door	TBGN's
1-3/8"	TBGN138-38
1-3/4"	TBGN134-38
2-1/4"	TBGN214-38