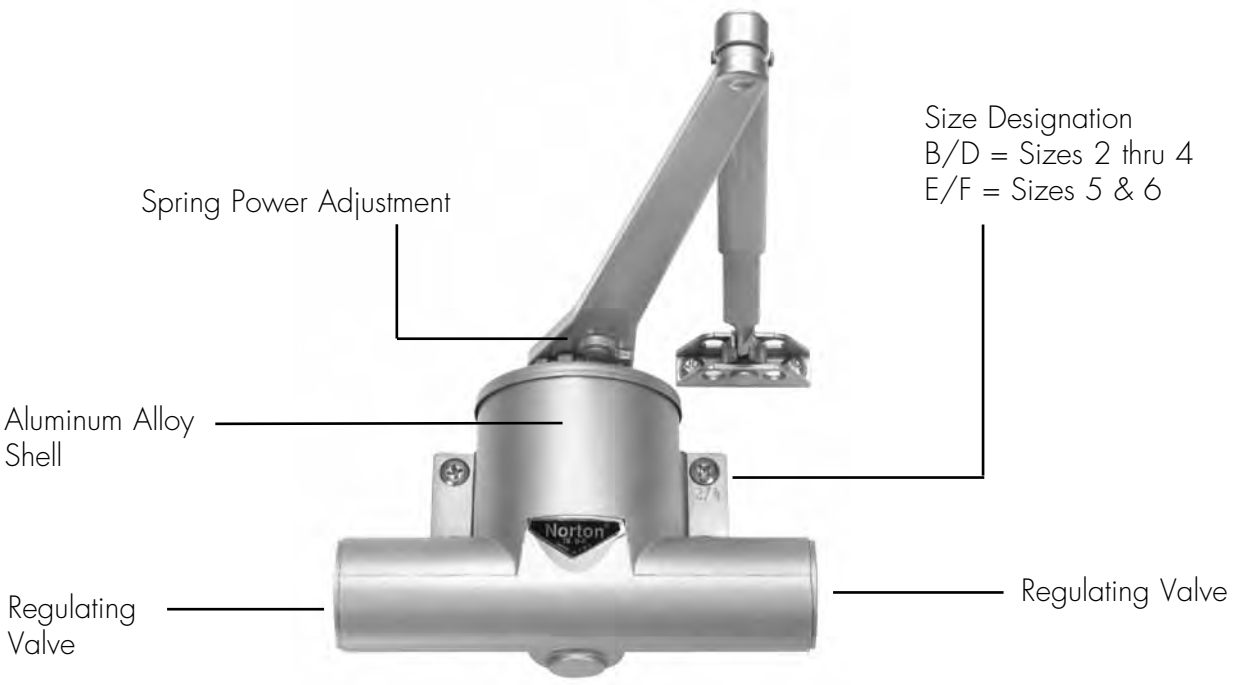
OVERVIEW



COMPLIANCE STANDARDS

- ANSI/BHMA A156.4, Grade 3
- UL / cUL listed for use on fire rated doors
- UL10C listed for positive pressure fire test
- This product is manufactured in an ISO 9001 facility
- Listed by the New York City Materials and Equipment Acceptance Division

SPECIFICATIONS

Closer for interior (and) exterior doors shall be rack-and-pinion type enclosed in a cast aluminum alloy shell. Closer spring shall be clock-type coil spring and shall be adjustable through a wide range of closing power. Closer shall be equipped with a single hex-key operated regulating valve for control of both closing and latch speeds. Closer shall have a hex-key operated regulating valve to control the adjustable backcheck feature. Closer shall be Norton® Series 78-B/F Traditional Surface Closer or equivalent.

HOW TO ORDER

UNI – Unitrol® Arm (specify door width)

MULTI-SIZE
B/D – Spring Size 2 thru 4
E/F – Spring Sizes 5 & 6

RA – Regular Arm
HA – Regular Arm, hold open
PA – Parallel Arm
PHA – Parallel Arm, hold open
PRA – Parallel Rigid Arm, non-hold open
PRHA – Parallel Rigid Arm, hold open
H – Hold Open – *Unitrol* arm only
DA – Delayed Action – Regular arm NHO only. Handed not reversible

UNI	78	B/D	H	RH	689
PREFIX	CLOSER SERIES	POWER SIZE	SUFFIX	HAND (Field Reversible)	FINISH (see below)

Note: Contact factory if door weight exceeds 250 lbs.

FASTENERS

Type	Description	Arm			
		RA	PA	PR	UNI
	DOOR				
SDST	Self-Drilling Self-Tapping	S	S	S	S
MS	Machine Screw	S	S	S	S
SN	Sleeve Nut	O	O	S	S
TBGN	Thru Bolts & Grommet Nuts	O	O	O	O
	FRAME				
SDST	Self-Drilling Self-Tapping	S	S	S	S
MS	Machine Screw	S	S	S	S

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 2-1/4" (57mm).

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.

FINISHES

Available Finishes

All door closers are painted in water-borne acrylics. All steel parts, arms, bracket and mounting plates are powder coated. The closers will withstand 100 hours of salt spray. ANSI requires 25 hours.

*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: 78-B/D x 600 x 689).

Sprayed Finishes

Description	Specify (BHMA) Designation	Complements the following finishes	Old Designation
Aluminum	689	628, 625, 629, 630, 651, 652	AL
Statuary Bronze	690	640, 613	STAT
Dull Bronze	691	612, 637, 639	DB
Black	693	315	315
Medium Amber	694	313	312
Gold	696	605, 606, 632, 633	GB
Prime Coat	600*	—	SRI

FEATURES

Aluminum Alloy Shell: Norton® closer shells are constructed of a special aluminum alloy, carefully selected to accommodate individual closer characteristics and operating conditions.

Adjustable Spring Power: Clock-type coil spring affords a wide range of closer power. Permits a fine adjustment of the closer to the environment.

Rack & Pinion Operation: Provides a smooth transmission of power for control of the door through its full opening and closing cycle.

Adjustable Sweep/Latch Speed: A dual purpose regulating valve, hex-key operated, permits independent adjustment of both sweep and latch speed.

Adjustable Backcheck Cushioning: An independent regulating valve, hex-key-operated, provides an adjustable hydraulic cushion to the door opening speed toward the end of the opening cycle. This feature is standard with all but delayed action closers. Backcheck is not available with delayed action closers.

Non-Hold Open Arm: Standard closer will be supplied with a non-hold open arm. This arm is non-handed.

Hold Open Arm: Closer arm has adjustable hold open feature (90° to 180°). This arm is non-handed for regular arm application only. It is handed for all friction hold open parallel arm installations. Order by suffixing "HA" to the Model number.

Warranty: Limited ten-year warranty for defects and life of the building on the aluminum housing.

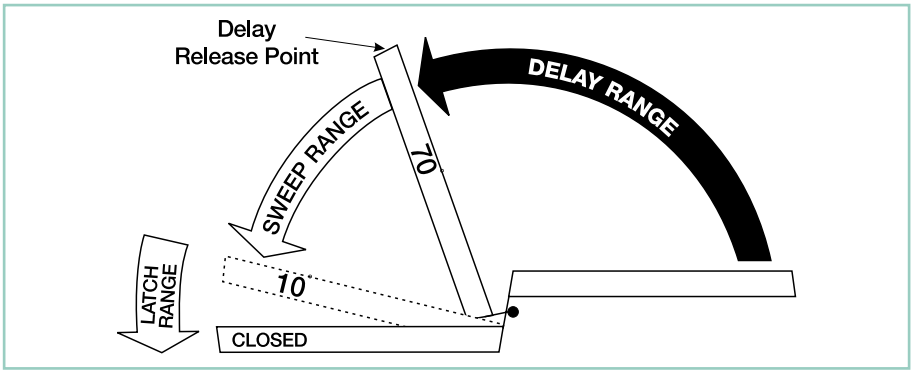
Field Reversible: Closer spring can be field-reversed to accommodate the hand of the door. It is recommended that wherever possible the closer be ordered handed. Parallel hold open arms and delayed action closers are not reversible.

***Note: Regular arm (NHO units only) are handed - not reversible**

OPTIONAL FEATURES

Adjustable Delayed Action Closing*
(Supplied in lieu of backcheck feature)
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



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, to kitchen and food processing areas, etc.

APPLICATIONS

Regular Arm
This is the only pull-side application where a double lever arm is used. It is the most power-efficient application for a door closer. Sufficient frame, door and/or ceiling clearance must be considered. Since the arm assembly projects directly out from the frame, this application may present an aesthetics issue or be prone to vandalism.

Parallel Arm
This application provides the most appealing design appearance for a surface-mounted door closer having a double lever arm. This also makes it beneficial in vandalism-prone areas. It is on the push side of the door and the arm assembly extends almost parallel to the door. In the closed position, there is very little or no hardware projecting beyond the frame face in most situations.

Due to the geometry of the arm it is approximately 25% less power-efficient than a regular arm application.

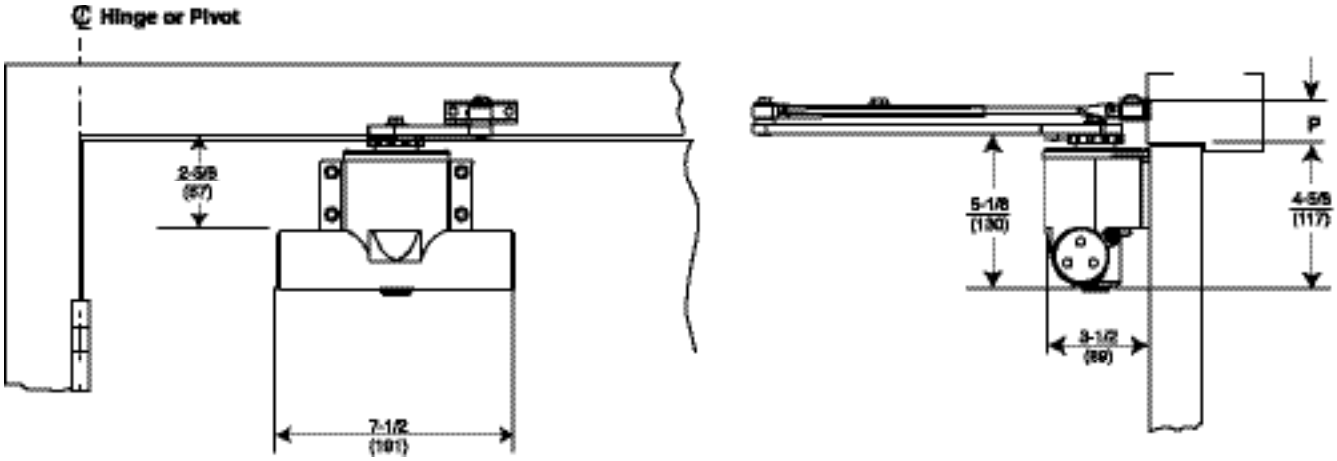
The entire closer and arm assembly are mounted below the frame stop, requiring a top rail of 5-3/8" (137mm) to mount the body. Clearance to the bottom of the closer body from the top of the door is 7-3/8" (187mm). (Based on 5/8" (16mm) high frame stop.)

Parallel Rigid Arm
An enhanced variation of the standard parallel arm assembly that is intended for use in heavy traffic areas where auxiliary door stops are installed. Hold open available - specify hand when ordering.

Unitrol® Arm (Parallel Arm applications only)
Unitrol arms combine the features of a double lever arm overhead door stop/holder with the backcheck feature of the door closer to reduce door stopping shock loads to a minimum. The *Unitrol* uses a compression spring buffer at the soffit plate/arm shoe that will absorb 30 lbf. of force, 5° prior to the door's dead stop. Coupled with the door closer's backcheck feature, this arm provides the most controlled stop available with a surface door closer.

For parallel arm applications there are three different length arm assemblies. Each length is designed for a specific range of door widths, to provide precise door control. This further lessens the dead stop impact on the door's hinges/pivots.

REGULAR ARM



Body mounting holes are spaced 4-1/8" (105mm) horizontally and 1-3/8" (76mm) vertically.

Maximum Door Size Wood or Metal Inches (cm)		Model Number	
Interior	Exterior	Non-Hold Open	Hold Open
48" (122)	36" (91)	78B/D-RA	78B/D-HA
—	44" (112)	78E/F-RA	78E/F-HA

P Minimum Ceiling Clearance	
Non-Hold Open	Hold Open
1-1/2" (38)	2-1/8" (54)

All dimensions are for reference only. Door sizing information is based on installation on standard weight doors, 7'0" (213 cm) high 1-3/4" (44 mm) thick, hung on anti-friction hinges and operating under normal conditions.

Note: Contact factory if door weight exceeds 250 lbs.