6000 SERIES

Low Energy Power Operator



Norton®

ASSA ABLOY

ASSA ABLOY, the global leader
in door opening solutions

INTRODUCTION

The 6000 Series, the newest addition to the PowerMatic® Family of Operators combines intelligence, reliability and superior control in one package. Designed with the user in mind, this operator features simple to use electronics, an onboard power supply and easy integration into access control systems.

Designed for moderate to high traffic applications, this operator has a two-piece sub-assembly for easy installation and LCD screen for clear and accurate read-out of operator settings. Available for push or pull side mounting, the 6000 Series can be operated manually or activated via wall switches or radio frequency devices. This reliable unit ensures consistent opening and closing based on dual mode, electrohydraulic technology and is ideal for hospitals, office buildings, sports arenas or government facilities.



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FEATURES

- Ease of installation and setup
  - Simple instructions
  - LCD screen and joystick controller
- Application versatility and ease of adjustment
  - Non-handed units
  - Push- or pull-side mounting
  - Interfaces with electric hardware
  - Integrates with access control systems
- Operates as mechanical surface closer during close cycles or if power is turned off
  - Critical for fire-rated doors
  - Clutch mechanism allows closer to function as a normal manual door closer
  - Door can be opened manually if desired
- Operation activation options
  - Wall switches
  - Motion sensor
  - Radio frequency device
  - Push and Go
- Obstruction Detection
  - Door closes if it hits an obstruction while opening
  - Door re-opens once if it hits an obstruction while closing
- Power Operator
  - When unit is activated door travels to open position

FUNCTIONS

- Push and Go selector
  - As the door is manually opened, the operator "senses" movement and opens door to the full-open position
- Open/Close obstruction detection
  - Open
    - Door closes if it hits an obstruction while opening
  - Close
    - Door re-opens (once) if it hits an obstruction while closing. If the door hits the obstruction again, the door will rest against the obstruction until it is removed.
- Motor startup delay adjustment
  - Delays operator opening
- Vestibule delay adjustment
- Hold open delay adjustment
- Single Pole Double Throw (SPDT) relay output
  - SPDT relay output time adjustment
  - SPDT alarm output
- Blow open for smoke ventilation
- Presence detector input
- Selector mode switch
  - Off - Disables signal inputs except blow open
  - On - Activates signal inputs
  - Infinite Hold Open - Door will hold open at set position until power is turned off

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ELECTRICAL DATA

- Power input 120 VAC, 60 Hz (+10%, -15%)
- Current draw 0.9A
- Auxiliary output 24 VDC @ 1.3A
- SPDT relay output for controlling electric strikes or electric locks not to exceed 1 amp @ 30 VDC

CERTIFICATIONS

- ANSI/BHMA A156.19 certified BHMA CERTIFIED
- ETL tested to UL / cUL standards for automatic doors used on fire and smoke barrier doors and CSA C22.2 No. 247 for operators and systems of doors
- UL10C listed for positive pressure fire test
- Comply with requirements for the Americans with Disabilities Act (A.D.A)
- California State Fire Marshall Listing 3266-0944:0110
- This product is manufactured in an ISO 9001 facility

An Environmental Product Declaration (EPD) documents the cradle-to-grave life cycle of a product and how it affects the environment. An important aspect of EPD® is to provide the basis of a fair comparison of products and services by its environmental performance. EPDs can reflect the continuous environmental improvement of products and services over time and are able to communicate and add up relevant environmental information along a product's supply chain.

ARCHITECTURAL SPECIFICATIONS

General Specifications

Door Controls (interior)(exterior) swinging door(s) shall be of rack and pinion design contained within a precision cast aluminum housing. Door closing force shall be adjustable to ensure adequate closing control. Door closing speed shall be controlled by independent hydraulic adjustment valves in the sweep and latch range of the closing cycle. Door Operator shall provide conventional door closer opening and closing forces unless the power operator motor is activated. Door Operator opening force and speed shall be adjustable in the inverter/interface module's LCD screen to ensure adequate opening control per accessibility codes. Door Operator shall have an adjustable hydraulic back-check valve to cushion the door speed if opened violently. Door Operator shall utilize the inverter/interface module's LCD screen and joystick to establish door closes and open positions. [(Door Operator shall be AUTOMATICALLY ACTIVATED by either a slight push or pull in the direction of opening swing – Push and Go.) (Door Operator shall be SELECTIVELY ACTIVATED by external initiating device, i.e. wall switch, etc.) (Door Operator shall be both AUTOMATICALLY ACTIVATED and SELECTIVELY ACTIVATED.)] Unit shall include "E-saver" feature to automatically recognize abled body traffic and immediately trigger door to close after sensing no forces on door. Unit shall have delay for motor activation, electric lock interfacing, and hold open time. Units shall have SPDT relay for interfacing latch retraction exit devices or similar products and have 24VDC @ 1.3A output for connection of electric strike, lock, radio frequency receiver, etc. Units shall have Vestibule sequencing input for operation of two or more units. Unit shall have smoke ventilation inputs to power open doors when activated by fire or smoke alarm. Unit shall have a three-position Selector Mode Switch that will permit the unit to be switched "ON" to monitor for function inputs, switched to "H/O" for indefinite hold open function or switched "OFF" which will disable function inputs allowing unit to be used as a manual door closer. Unit shall be ETL tested to UL standards for automatic closing door. The Unit shall be adjustable to provide compliance with the requirements of the Americans With Disabilities Act (ADA). Unit shall be certified by BHMA to meet ANSI A117.1 and A156.19 requirements. Unit shall meet UL, cUL, UL10C and UL10B standards.

Additional Specifications for Functions

For Power Operator Function:

When activated, the unit shall, by means of a motor, chain and closer, power open the door at both a speed and force that are adjustable to accessibility codes. The door shall be powered from a door closed position to a full door open position and remain in momentary hold open for 5 seconds minimum (adjustable 0 to 30 seconds in 1 second increments). [(Unit shall power open door to full open position up to 110°.) (Unit shall be capable of opening door manually from 110° – 180°.)] Once unit reaches full hold open position, if reinitiated, unit's momentary hold open time shall restart from the maximum set time. If unit is initiated during the closing cycle, unit shall revert to opening cycle beginning at that door position. Unit shall have a toggled hold open input that upon first initiation will power door to a maintained hold open position; a second initiation will allow door to close. Unit shall have obstruction detection on closing, which will reverse the closing door to the full open position then re-attempt to close door after momentary hold open time has elapsed. Obstruction detection on opening shall shut motor off, allowing door to close under spring force. These obstruction detection features shall be integral to unit. During closing cycle, the unit shall close door under full spring power not to exceed a closing force of 15 lbf.

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HOW TO ORDER

60	2	0	SUFFIX	x FINISH

FIRST TWO DIGITS
Product Series

THIRD DIGIT
Identifies Type of Application

HINGE (PULL) SIDE OF DOOR*
1 – Rigid Arm & Slide Track 110° maximum door swing maximum reveal 1/8" (3mm)
5 – Double Egress Arm & Slide Track 110° maximum door swing for reveals 1/8" to 3" (3 to 76mm) (specify hand when ordering)

STOP (PUSH) SIDE OF DOOR
2 – Standard-Duty Double Lever Arm 110° maximum door swing
Reveals 2-3/4" to 6-7/8" (70 to 175mm)
3▲ – Standard-Duty Double Lever Arm 180° maximum door swing
Reveals 2-3/4" to 6-7/8" (70 to 175mm)
6◆ – Heavy-Duty Double Lever Arm 110° maximum door swing
Reveals 2-1/4" to 4-3/4" (57 to 121mm)
7 – Heavy-Duty Double Lever Arm 110° maximum door swing
Reveals 4-13/16" to 7-3/8" (122 to 187mm)

▲Models will be power operated to 110° but can be manually opened to 180°
◆Reveals less than 2-1/4" (57mm) may be achieved by field cutting the adjusting rod

*Consult Technical Support Department when door is hung on offset pivots

FOURTH DIGIT
Closer Power Size
0 – Adjustable for sizes 1 thru 6

SUFFIXES (options)
RF – Radio Frequency Control
- Factory Wired
- Requires 531, 532 door switch or 500 switch post (433MHz) (Maximum codes: 100)

D – Drop application for less than 5" minimum ceiling clearance. Refer to page 10 for bracket only.

FINISHES
Product will be sprayed with a combination of waterborne acrylic and polyester powder coat.

Description	Specify Norton Designation (BHMA)	Complements the following finishes	Old Designation
Aluminum	689	628, 625, 629, 630, 651	AL
Statuary Bronze	690	640, 613	STAT
Dull Bronze	691	612, 637, 639	DB
Black	693	315	315
Medium Amber	694	312	312
Gold	696	605, 606, 632, 633	GB
Prime Coat*	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: 6010 x 600 x 689).

For application assistance, Norton offers complete services from specifying product to engineering a door system which includes riser and wiring diagrams. Consult Norton Technical Product Support for additional information.

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STANDARD APPLICATIONS



6010/6050
HINGE (PULL) SIDE OF DOOR

- Buffered stop assembly in slide track

6010 RIGID ARM AND SLIDE TRACK

- 85° to 110° templated door openings in 5° increments
- 1/8" (3mm) maximum frame reveal

6050 DOUBLE EGRESS ARM AND SLIDE TRACK

- From 1/8" to 3" (3 to 76mm) frame reveal
- Specify hand when ordering

An auxiliary stop is suggested where severe conditions exist.



6020/6030
STOP (PUSH) SIDE OF DOOR

STANDARD-DUTY DOUBLE LEVER ARM

- Frame reveals 2-3/4" to 6-7/8" (70 to 175mm)
- An auxiliary door stop is required for these applications

Series	Door Opening
6020	Up to 110°
6030	From 110° to 180°

Note: Drop applications are needed if the ceiling clearance is less than 5".
Specify 6020-D (minimum door width = 33" (84cm) or 6030-D (minimum door width = 31" (79cm)



6060/6070
STOP (PUSH) SIDE OF DOOR

HEAVY-DUTY DOUBLE LEVER ARM

- Maximum frame reveals (see chart)
- 85° to 110° templated door openings in 5° increments
- Spring buffered stop in arm shoe assembly

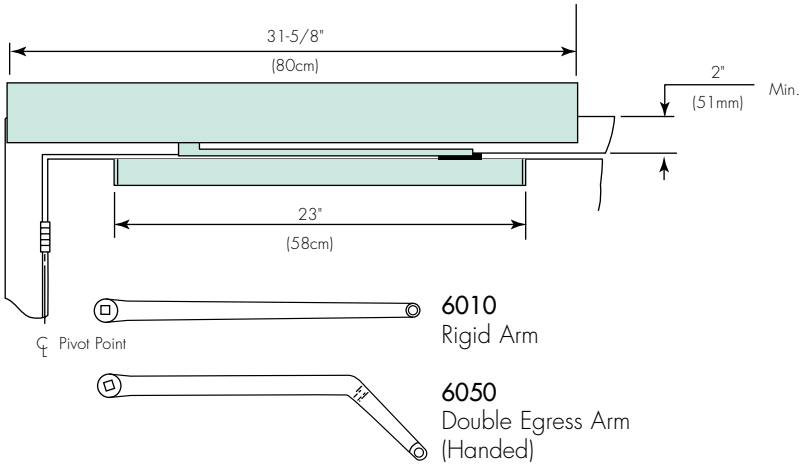
Series	Reveal Range
6060	2-1/4" to 4-3/4"* (57 to 121mm)
6070	4-13/16" to 7-3/8" (122 to 187mm)
* Reveals less than 2-1/4" (57mm) may be achieved by field cutting the adjusting rod	

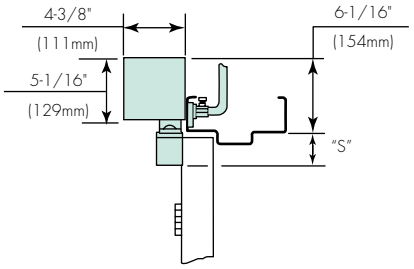
Note: Drop applications are needed if the ceiling clearance is less than 5". Specify 6060-D or 6070-D

NOTE: Contact factory if door weight exceeds 250 lbs.

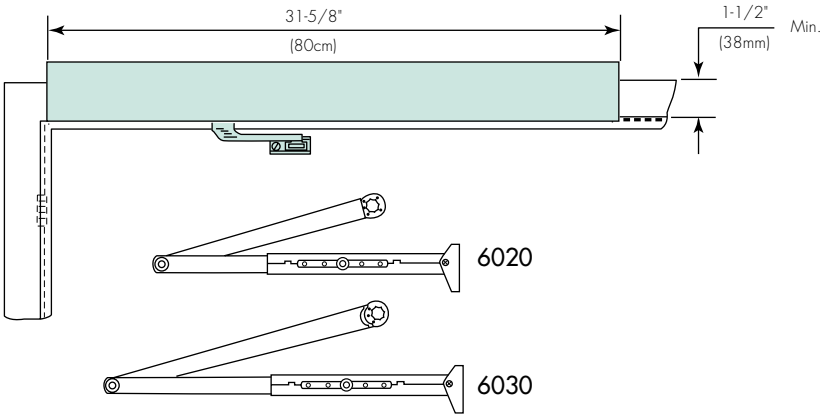
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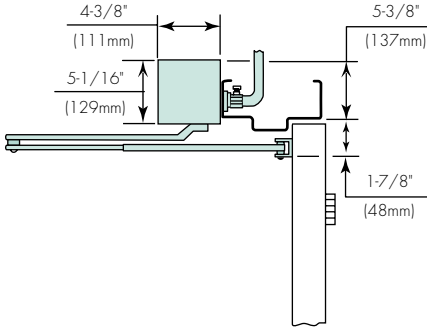
STANDARD APPLICATIONS



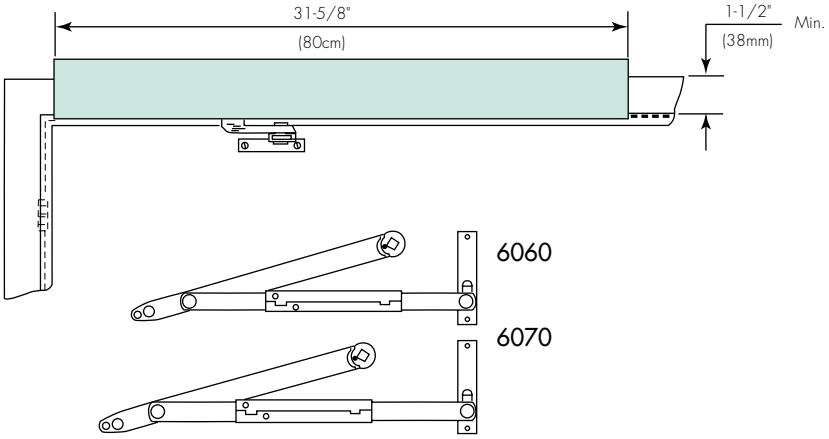


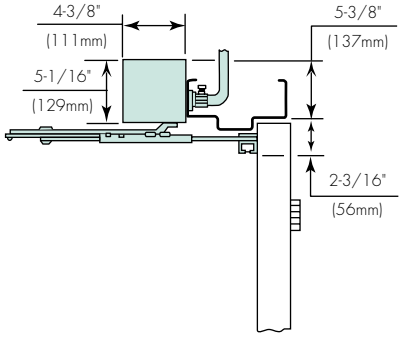
Series	Dim "S" Min. Top Rail of Door
6010	1-3/4" (44mm)
6050	2-3/8" (60mm)





Door Swing	90°	180°
Minimum Door Width (cm)	32" (81)	29" (74)





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ACCESSORIES

Activating Door Switches



501



502

- 4-1/2" W. x 4-1/2" H.
- 15 amp @ 125 VAC
- Flush mounted – hard wired
- Fits single or 2 gang electrical box
- **501** – Stainless steel with black letters
- **502** – Blue powder coat with white letters
- Specify #542 to order surface mount box for 501 or 502 switch



505, 531



507, 532



506, 533



534, 535

- 6" W. x 6" H.
- 9 volt battery
- 15 amp @ 125 VAC
- Flush mounted
- Stainless steel with blue letters
- **531, 532, 533** and **535** radio frequency (433MHz). Used with RF option and 539. Supplied with surface mount boxes.
- **507, 505, 506 and 534** hard wired*. Surface mounted boxes are not supplied. If required, specify:
  555 - 6" square surface mount box
  557 - 6" round surface mount box

* **Switches may also be installed with single or double gang electrical box using fasteners included.**



503

- 1-1/2" x 4-3/4" face plate
- SPDT UL listed switch-mom.
- 15 amp @ 125 VAC
- Fits 1-3/4" frame
- Stainless steel with blue letters

Vestibule Switches



504

- 5" W. x 4-3/4" H.
- 2 – SPDT UL listed switches-mom.
- 15 amp @ 125 VAC
- Fits 2-gang electrical box
- Stainless steel with blue letters

Touch Less Wall Switch



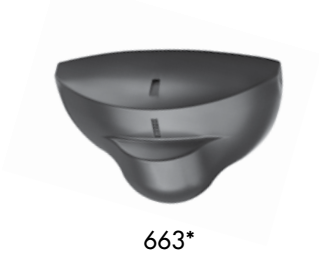
697

- Single gang and double gang
- Doppler radar
- Sensor requires movement for activation
- Variable relay-hold time from 1 to 10 seconds
- Range of 2" to 24" – field adjustable
- 2-3/4" (Single); 4-1/2" (Double) W. x 4-1/2" H.

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ACCESSORIES

Motion Sensor



663*

- 4-3/4" x 3-3/16" x 2" projection
- Unidirectional
- Black cover
- SPDT relay
- Adjustable angle pattern
- 24 VDC input
- Must not be placed where motion of door can be sensed

Switch Post



500 & 530

- 4" x 6" x 40" x 3/16" wall thickness
- 9 volt battery
- RF temperature range: -4° F to 122° F
- 689 (aluminum) or 690 (dark bronze) finishes; specify when ordering
- Standard formed plastic cap
- Surface mounted (above ground)
- **530** - radio frequency transmitter
- **500** - hard wired switch
- **530POST** - post only; switch not included

Security Plate Package



6000SEC

Conceals the ON/OFF/HOLD OPEN (ON/OFF) switch to deter tampering. Packed standard with the operator.

Transmitters



536

- 2-3/8"w x 4-3/16"h x 15/16"d
- Single channel



538

- 2-3/8"w x 4-3/16"h x 15-16"d
- Two channel



548

- Converts existing hard wired push plates to work with RF receivers offered after June 2013
- Single channel
- 9 volt

Radio Frequency Receiver



539

- 433 MHz

Low Profile Push Plate



- 36" x 6" activation zone
- 1" low profile depth
- Stainless steel face plate
- Adapts to either wireless or hardwired installations
- **638** - Wireless
- **639** - Hardwired

*Use of motion sensor must be approved by local authority having jurisdiction.

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OPERATIONAL SIGNAGE

#679 Signage Kit (supplied standard)



(1 per switch)

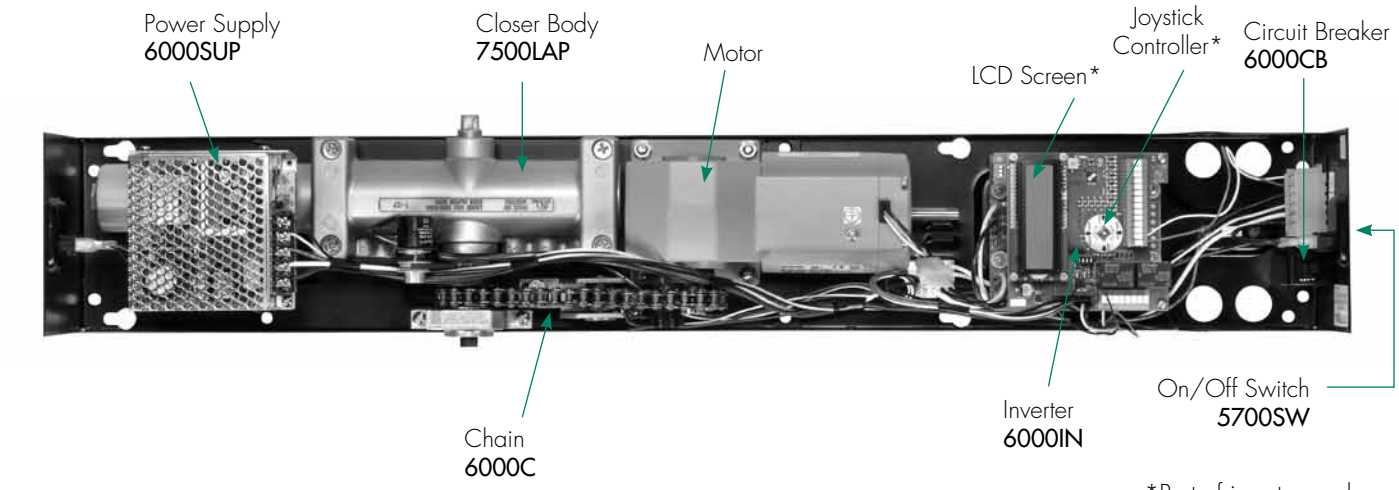


(1 per switch)



(2 per operator)

PARTS LIST



*Part of inverter package

Unit Sub-Assembly

Part Number	Description
6010LAP	6010, 6050 Unit Sub-Assembly (NHO)
6020LAP	6020, 6030, 6060, 6070 Unit Sub-Assembly (NHO)
6000LAP	6000 Back Plate Sub-Assembly

Dummy Units

Part Number	Description
6010-DMY	6010 Dummy Unit
6020-DMY	6020 Dummy Unit
6030-DMY	6030 Dummy Unit
6050-DMY	6050 Dummy Unit (Handed)
6060-DMY	6060 Dummy Unit
6070-DMY	6070 Dummy Unit

Drop Angle Brackets

Part Number	Description
6000DAB	Drop Angle Bracket
6000DAB180	Drop Angle Bracket - 180° Swing

Miscellaneous Parts

Part Number	Description
6000PB	Pillow Block Assembly
6000COV	Standard Cover
6000SFB	Aluminum Storefront Bracket
SP6000	Screw Pack



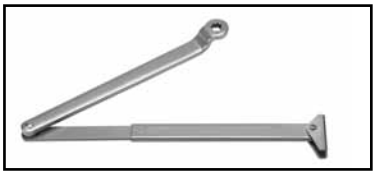
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PARTS LIST

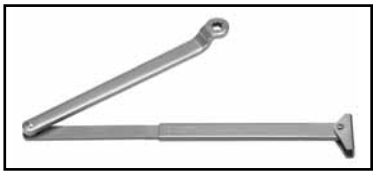
Arm and Track Assemblies



#6610-1 – Arm and Track Assembly
#7210-1A – Arm Assembly
#7200-1T – Track Assembly



#6020-1 – Arm Assembly
#6020-1W – Main Arm & Rod
#6620-12 – Adjusting Tube & Shoe



#6030-1 – Arm Assembly
#6030-1W – Main Arm & Rod
#6620-12 – Adjusting Tube & Shoe

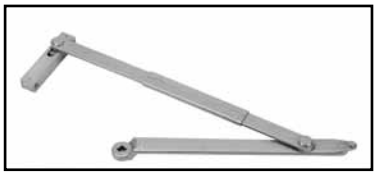


Left hand shown

#6050-1L – Arm and Track Assembly (LH)
#6050-1R – Arm and Track Assembly (RH)
#7250-1L – Arm Assembly (LH)
#7250-1R – Arm Assembly (RH)
#7200-1T – Track Assembly



#6660-1 – Arm Assembly
#6660-11 – Rod & Snubber Assembly



#6670-1 – Arm Assembly
#6670-11 – Rod & Snubber Assembly

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For a complete listing of products and applications please visit our web site.
www.nortondoorcontrols.com
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ASSA ABLOY is the global leader in door opening solutions, dedicated to satisfying end-user needs for security, safety and convenience.

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