



ED50 low energy operator

Description

The ED50 low energy swing door operator is the perfect solution for barrier-free access applications, offering a true manual door closer experience. Simple and easy to install, the ED50 provides many features and functions to make existing doors easily accessible.

This medium-duty swing door operator can automate new or existing swing doors with a push plate, wave plate, or other "knowing act" device. The ED50 combines advanced automatic power assist, minimal push forces (as low as ANSI size 1) and reliable closing. Outswing or inswing doors can be adapted for barrier-free access with push, pull, or deep reveal arms suited to a wide variety of door hanging options.

Operator Types and Configurations

- 4" × 6" Narrow Header
 - Surface applied
 - Overhead concealed
- 2-3/4" × 5-1/8" Fine Cover
 - Surface applied



ED50 technical specifications

Configuration	
Header dimensions (H x D x L)	4" x 6" x length as required (Narrow) 2-3/4" x 5-1/8" x length as required (Fine)
Operator weight	26.5 lb
Internal power supply available for accessories	24 volts DC ± 5% 1.5 A
Maximum door opening angle	110° (door stop recommended)
Maximum wire size	16 AWG
Maximum door weight	220 lb at 48" door width
Door width	Minimum 28" Maximum 48"
Axle extensions	13/16" (20 mm) 1-3/16" (30 mm) 2-3/8" (60 mm)
Reveal depth for pull arm	1-3/16" (30 mm)
Reveal depth for CPD pull arm with CPD lever	2-1/4"
Reveal depth for standard push arm	0 to 9-3/4"
Reveal depth for deep push arm	8" to 19-3/4"

Required operating conditions	
Ambient temperature	5°F to 122°F
Dry locations	Relative air humidity: Maximum 93%, non-condensing
Power supply	115 volts AC ± 10%, 50/60 Hz Maximum 6.6 A
Branch circuit protection (provided by others)	Maximum 15 Amps, dedicated branch circuit
Protection class	NEMA 1
Power wiring: black, white, bare copper (ground)	Maximum 12 AWG
Operating noise	Maximum 50 db(A)

Inputs			
Activation inputs	X4*	Interior, exterior	Normally open contact
Safety sensors	X5	Swing, approach sides, normally closed contact	
Night/bank (intercom system)	X10 57, 57a	8 to 24 volts DC/volts AC + 5%	
Night/bank (key switch)	X1 35, 3	d2 parameter	Configure for Normally Open or Normally Closed
Deactivation of drive function	X6 4, 4a	d1 parameter	Configure for Normally Open or Normally Closed

Door closer modes	
Automatic mode	Door opens automatically following pulse generation by a knowing act device or by push/pull.
Manual mode	Designed for doors primarily accessed manually.
Power assist	Available only in door closer mode, manual opening drive support is automatically adjusted to operator size.

Integrated functions			
Opening force N (lbf)	Fo parameter	Minimum 20 lbf (4.5)	Maximum 60 lbf (13.5.5)
Manual closing force N (lbf)	Fc parameter	Minimum 20 lbf (4.5)	Maximum 60 lbf (13.5.5)
Maximum opening speed, degrees per second	27 %s	May be limited by door weight after learning cycle.	
Maximum closing speed, degrees per second	27 %s		

Hold open time			
Automatic opening	dd parameter	0 to 30 seconds	
Night/bank	dn parameter	0 to 30 seconds	
Manual opening	do parameter	0 to 30 seconds	
Door blocking behavior	hd parameter	Automatic, manual door modes	
Electric strike delayed opening for locking mechanism	Ud parameter	0 to 4 seconds	
Door status X7 97, 98, 99	Sr parameter	Door closed	Common
		Door open	Normally Open
		Door closed, locked	Normally Closed
Locking device feedback X3 43,3	Motor lock		
Wind load control, maximum	Fo, Fc parameters	22.5 lb f	100 N
Voltage independent braking circuit	Adjustable with potentiometer		
LED status indicators Service manual	Green Red Yellow	24 Vdc power Error codes Service interval	
Program and Exit Only switches	Auto, Close, Open, Exit Only; Off, On		
User interface	4-button keypad, 2-digit display		
TMP, temperature management program Service manual	Overload protection		
IDC, initial drive control	Driving phase optimization		
Cycle counter	CC parameter	0 to 1,000,000	
Power assist function	hA, hF, hS parameters	Drive support for manual opening door	
Push & go function	PG parameter	Auto opening of door at 4° open	

Standards of compliance

The ED50 operator is set to low energy (A156.19) conformance from the factory.

Upon installation, the ED50 can be configured to meet ANSI/BHMA A156.19, U.S. Standard for Power Assist and Low Energy Power Operated Doors.

Low energy power operated door

A door with a power mechanism that opens the door upon receipt of a "knowing act" activating signal, does not generate more kinetic energy than specified in ANSI 156.19, and includes provisions to reduce the chance of user injury or entrapment. In an A156.19 application, this is achieved utilizing the following design factors:

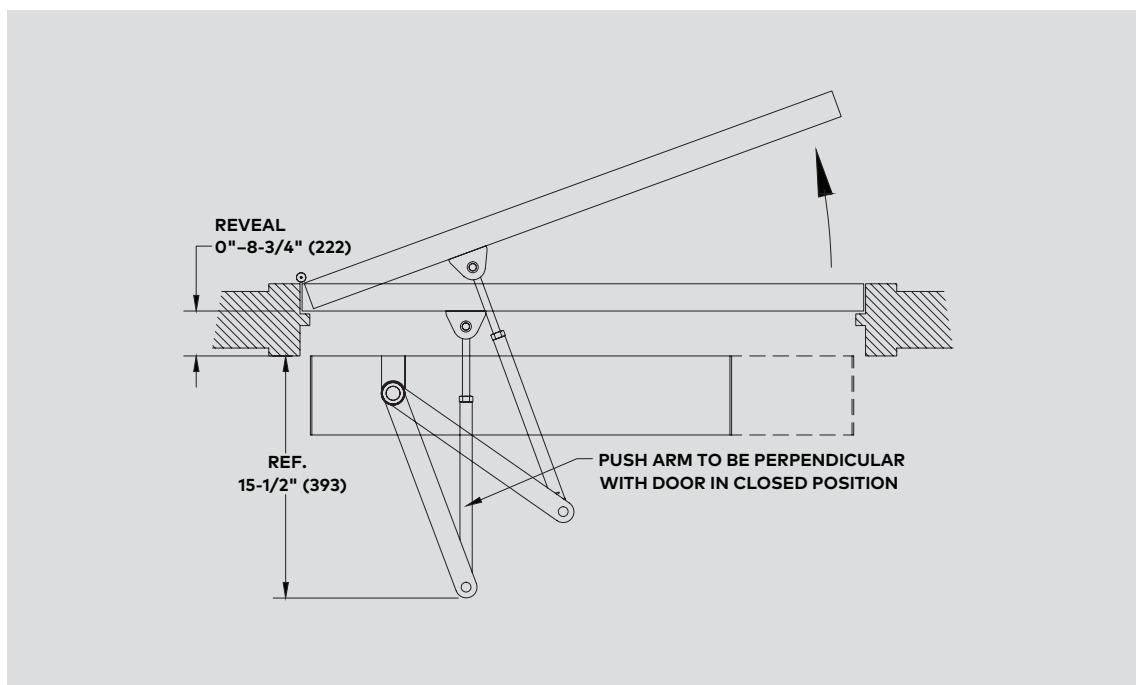
- Reduced dynamic door panel contact forces
- Reduced static door panel contact forces
- Time Delays
- Low opening and closing speeds
- Force limitations
- Signage

ED50 Fine Cover surface applied

Plan view

Single push operator

Left hand door shown (right hand opposite)

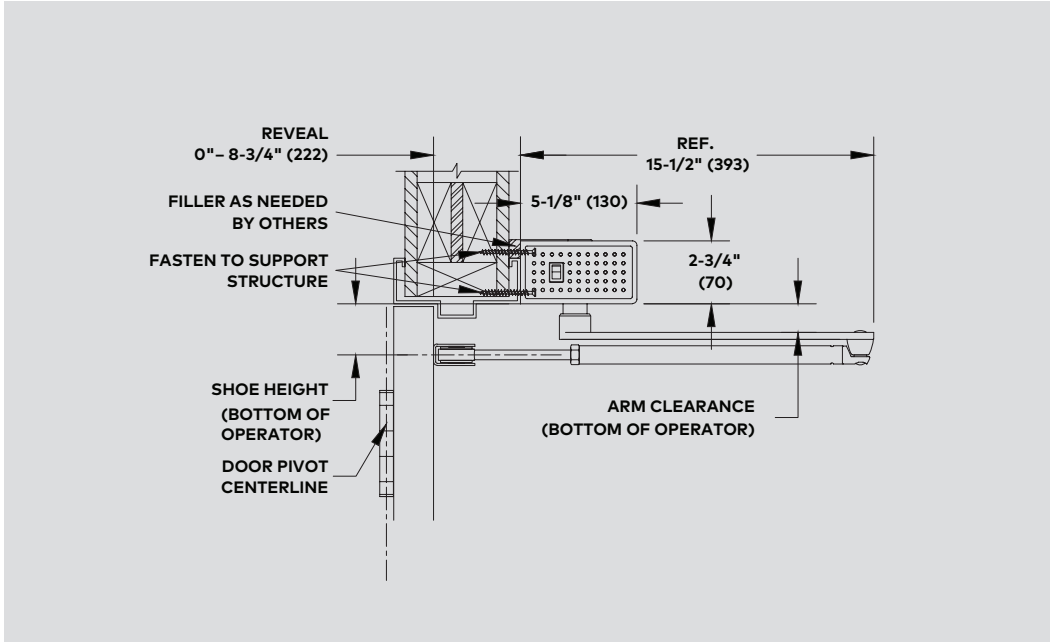


ED50 Fine Cover surface applied

Section view

Push operator

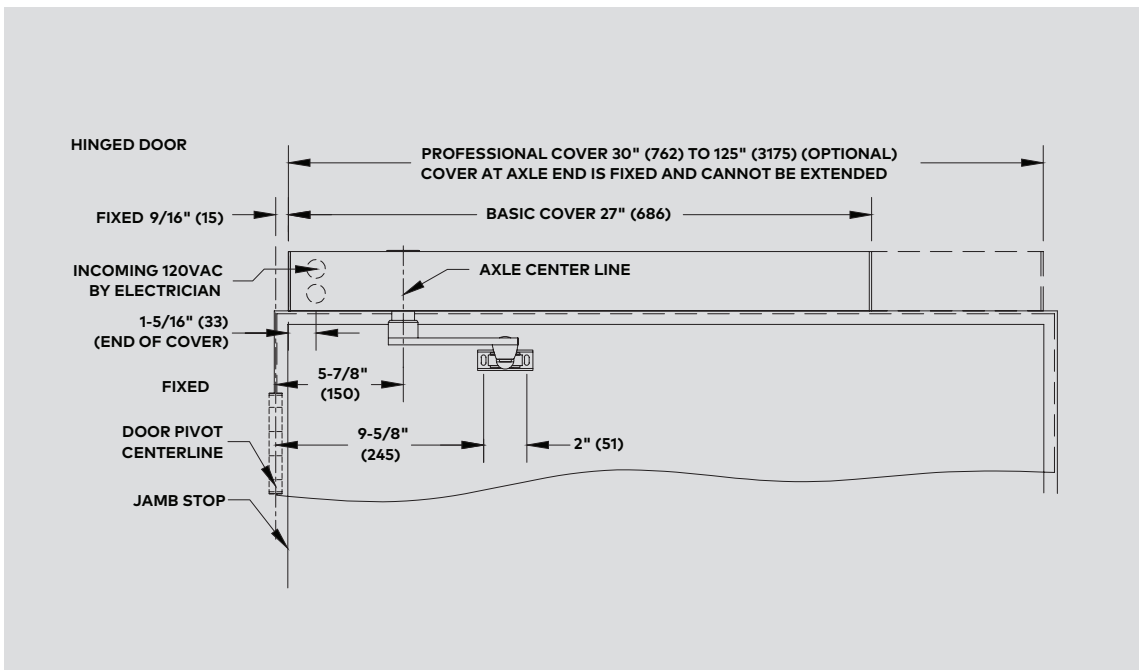
Left hand door shown (right hand opposite)



Elevation view

Single Push operator

Left hand door shown (right hand opposite)

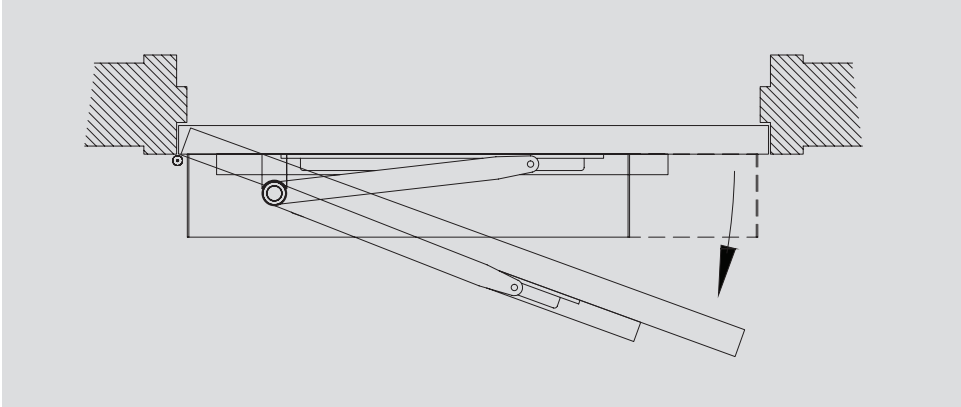


ED50 Fine Cover surface applied

Plan view

Single pull operator

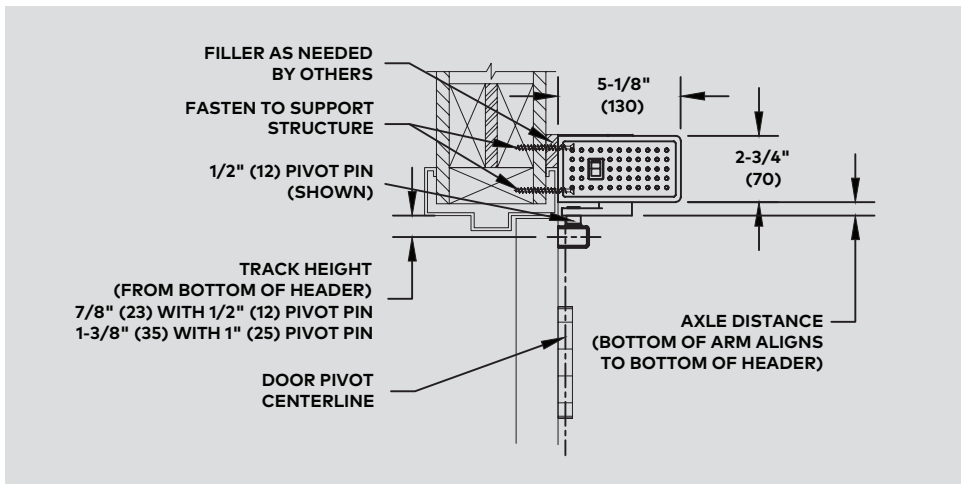
Right hand door shown (left hand opposite)



Section view

Pull operator

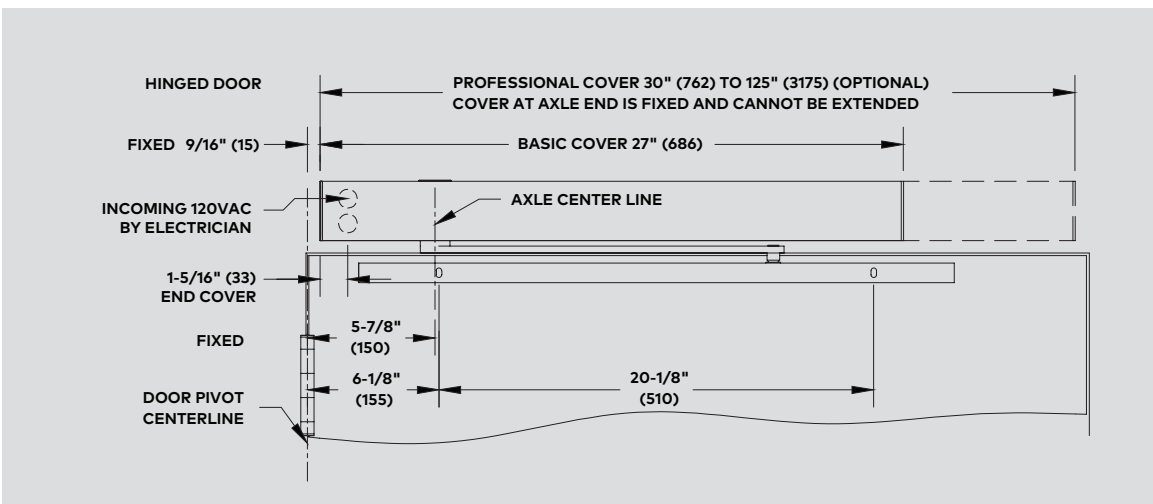
Right hand door shown (left hand opposite)



Elevation view

Single pull operator

Right hand door shown (left hand opposite)

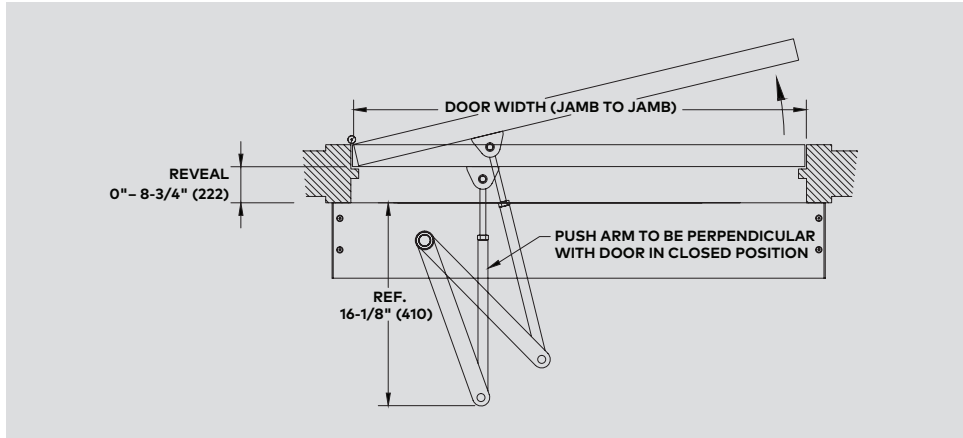


ED50 4 x 6 Narrow Header surface applied

Plan view

4x6 Narrow Header single push operator

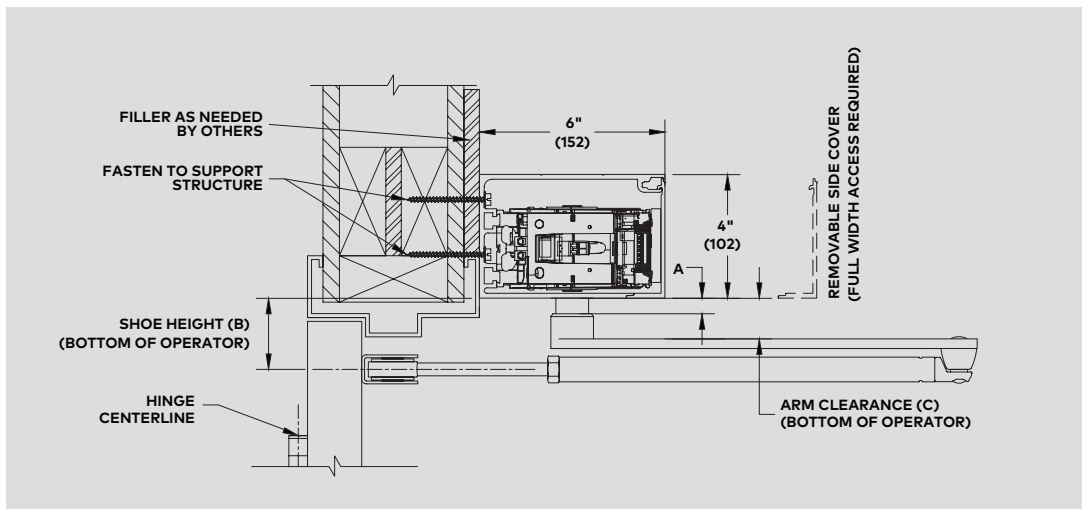
Left hand door shown (right hand opposite)



Section view

4x6 Narrow Header push operator

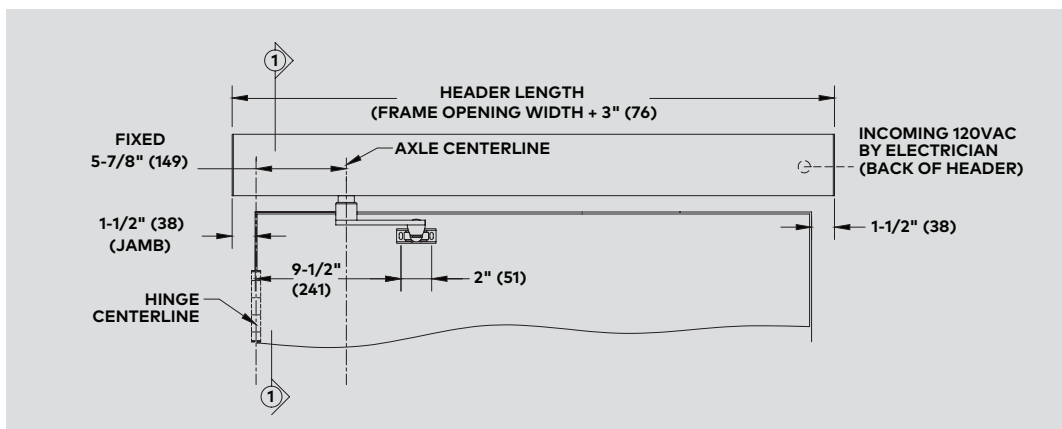
Left hand door shown (right hand opposite)



Elevation view

4x6 Narrow Header single push operator

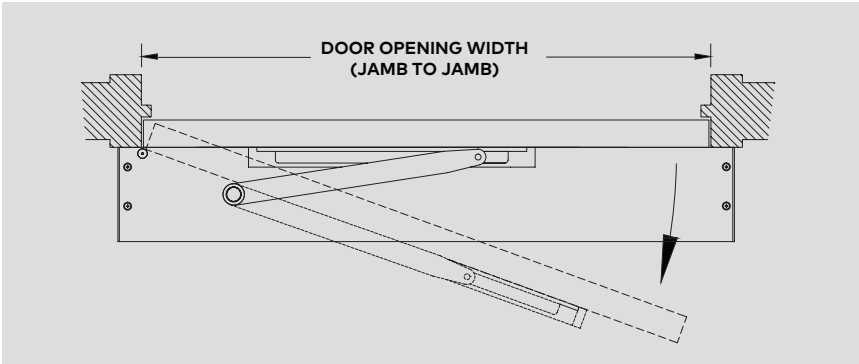
Left hand door shown (right hand opposite)



ED50 4 x 6 Narrow Header surface applied

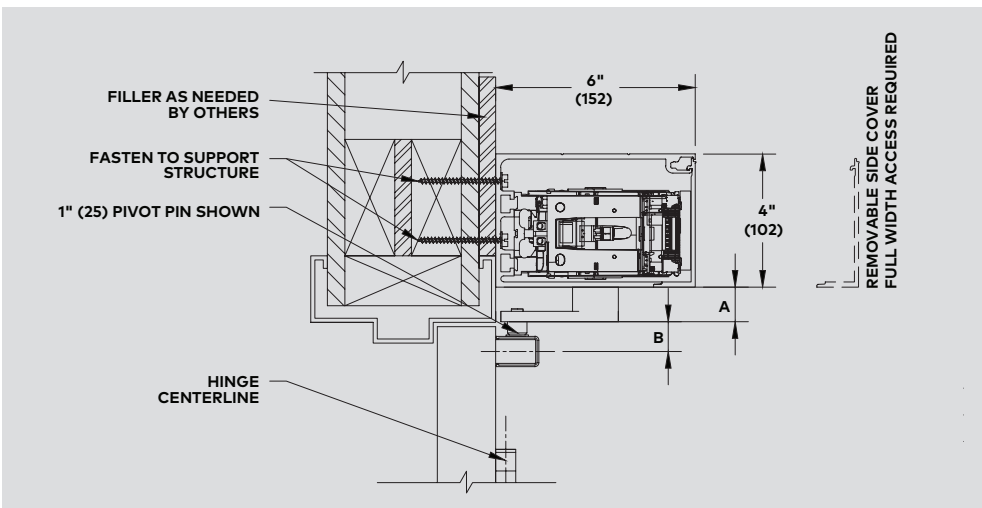
Plan view

4x6 Narrow Header single pull operator
 Right hand door shown (left hand opposite)



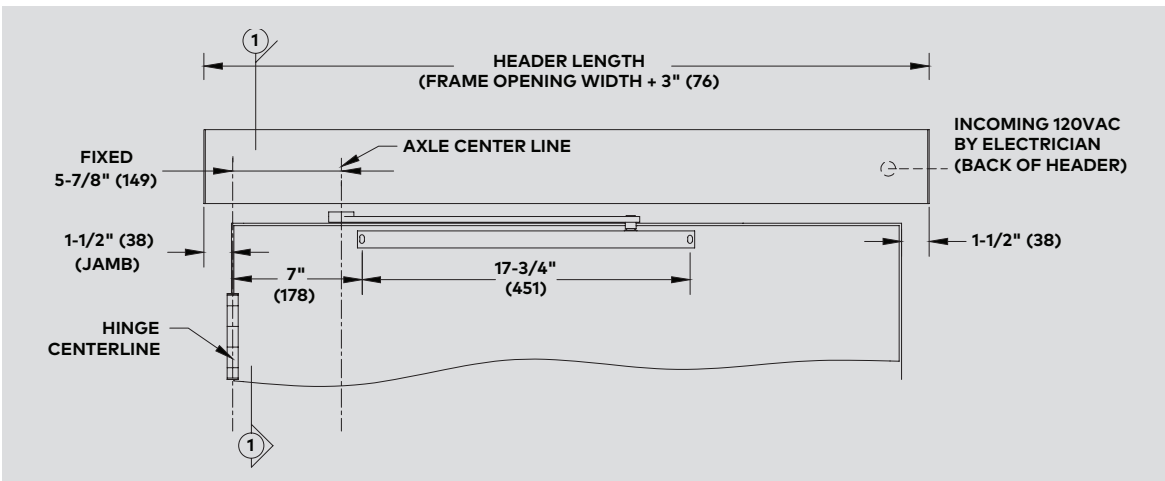
Section view

4x6 Narrow Header pull operator
 Right hand door shown (left hand opposite)



Elevation view

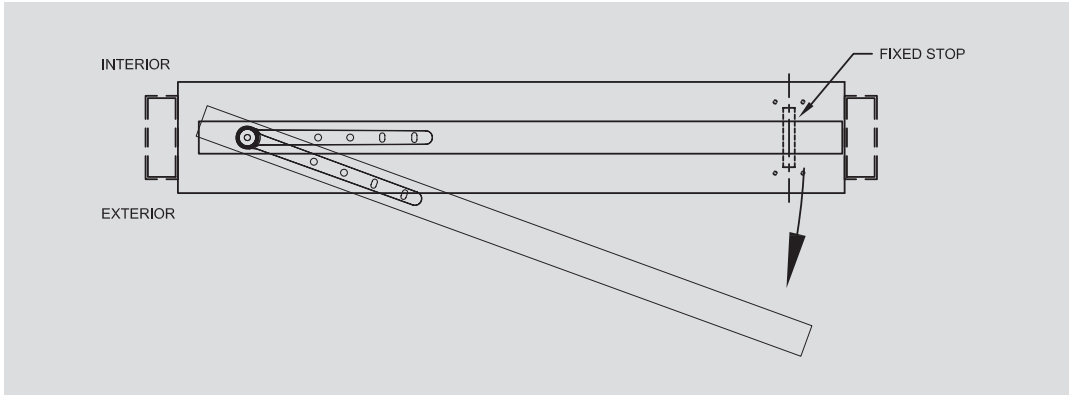
4x6 Narrow Header single pull operator
 Right hand door shown (left hand opposite)



ED50 Overhead concealed

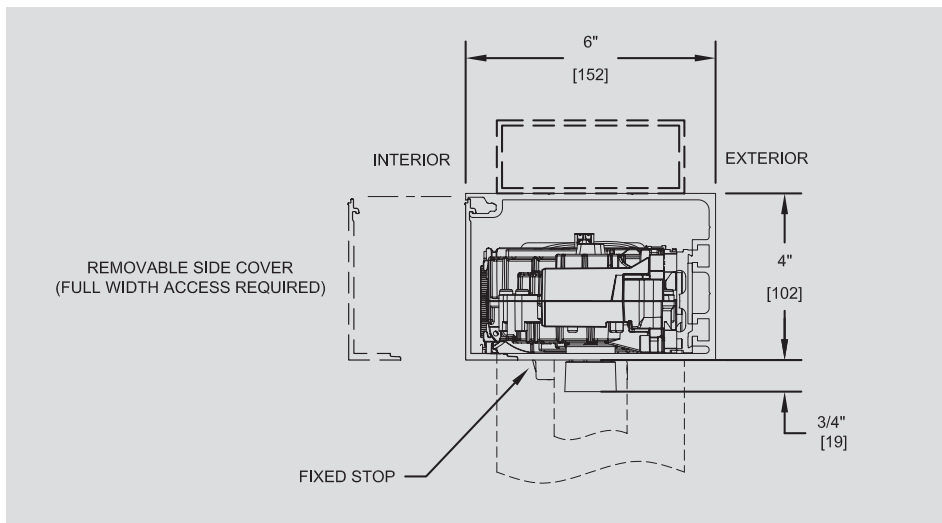
Plan view

Overhead concealed single operator center hung
Right hand door shown (left hand opposite)



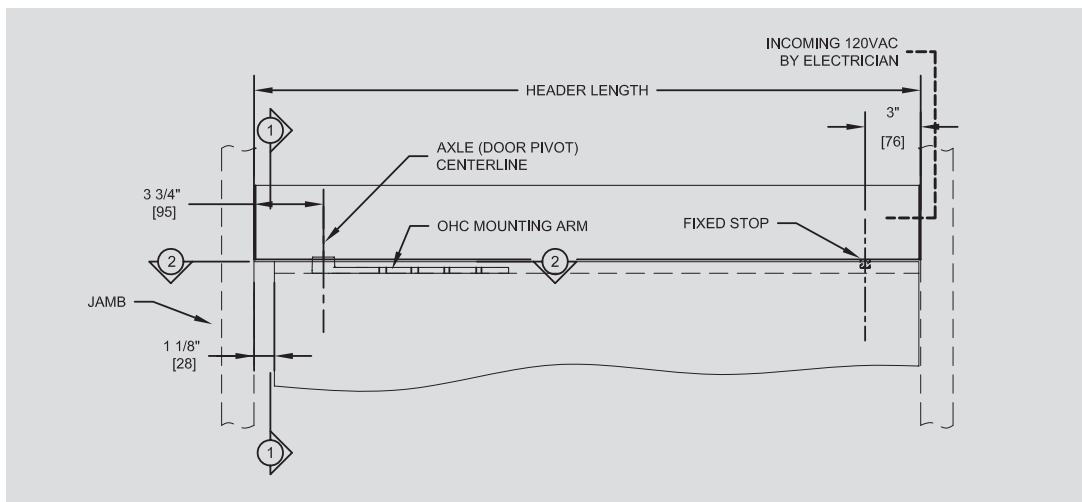
Section view

Overhead concealed pull operator center hung



Elevation view

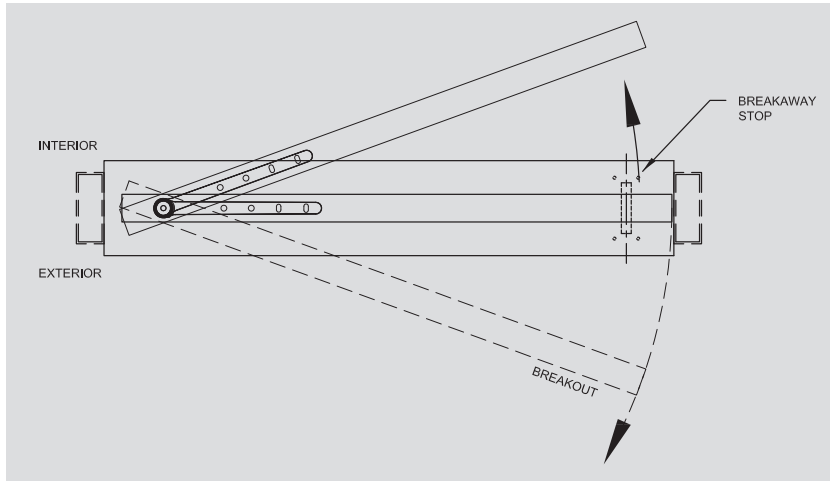
Overhead concealed single operator center hung
Right hand door shown (left hand opposite)



ED50 Overhead concealed

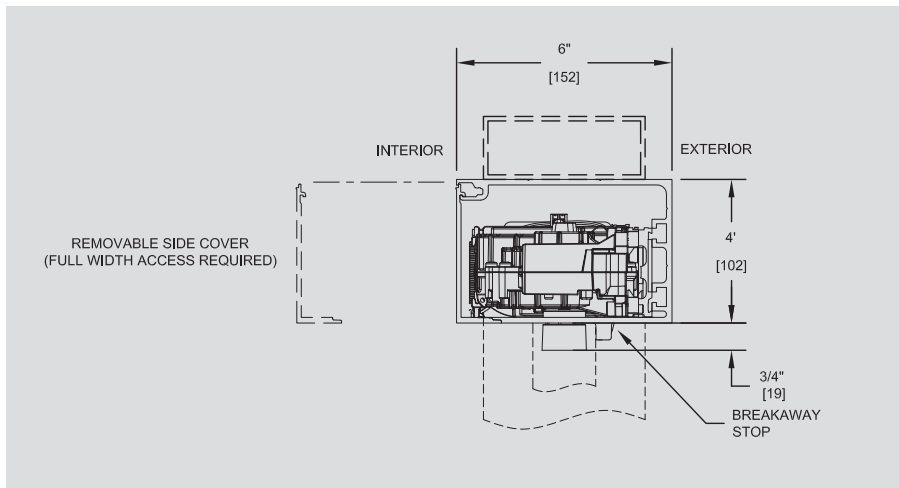
Plan view

Overhead concealed single operator center hung
Left hand door shown (right hand opposite)



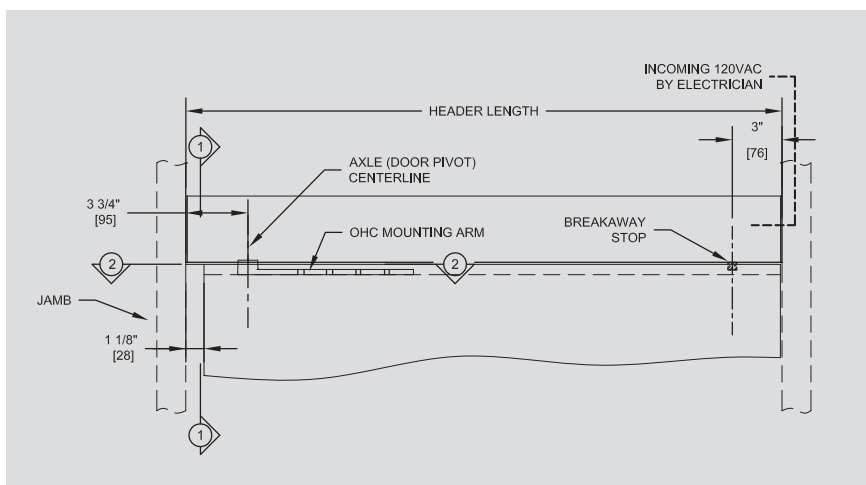
Section view

Overhead concealed pull operator center hung



Elevation view

Overhead concealed single operator center hung
Left hand door shown (right hand opposite)



07000510 EO 1:19

dormakaba USA Inc.
Dorma Drive, Drawer AC
Reamstown, PA 17567
844-SPECNOW
www.dormakaba.us