

Carey Automatic Door, LLC

ELECTRO-PNEUMATIC OPERATOR DESCRIPTION

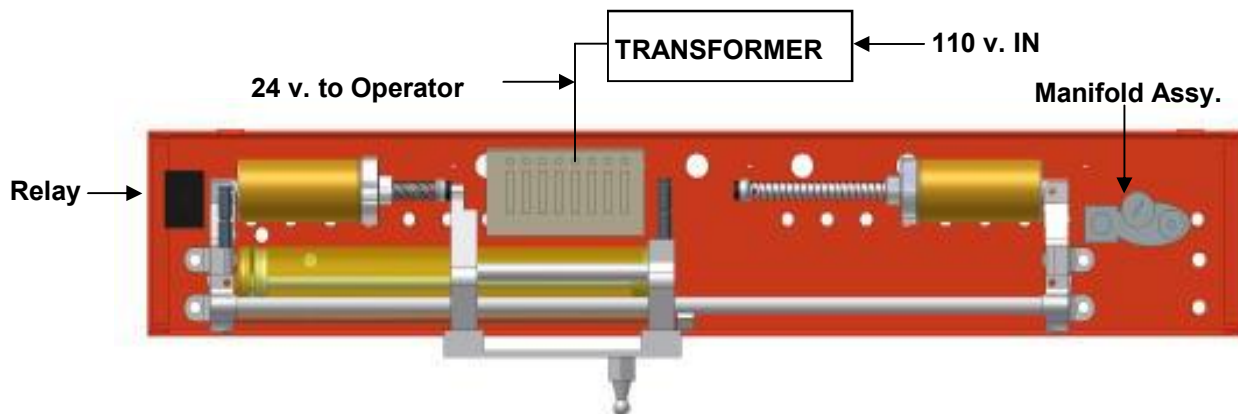
DESCRIPTION OF AN ELECTRO-PNEUMATIC DOOR OPERATOR:

1. An Operator powered from a central air supply or separate compressor.
 - a. This may be a single or double unit depending on the width and weight of door.
 - b. May be mounted to header above the door.
 - c. May be concealed either above or below the door with special pivots.
2. Connecting Links from Operator to door which permit door movement when Operator is actuated.
 - a. Swinging and Bi-Folding doors.
 1. Door bracket on door.
 2. Door rod which couples door bracket to Operator slide.
 - b. Sliding doors.
 1. Lever and connecting links coupling door to Operator and slide.
3. Opening and Closing Valves (electrically energized) mounted in Operator to control opening speed.
 - a. Closing may be by:
 1. Springs mounted in Operator.
 2. Pneumatically or electrically energized closing valve mounted in Operator.
4. Controls to actuate Operator.
 - a. Infrared safety systems.
 - b. Motion sensors.
 - c. Carpets/mats for pedestrian traffic (or equivalent).
 - d. Photoelectric for fully automatic operation (or equivalent).
 - e. Manual switches or valves (pull cords, push buttons, etc.) for semi-automatic operations.

HOW AN ELECTRO-PNEUMATIC OPERATOR WORKS:

The Operator is an air powered cylinder which is plunger actuated when air is introduced into the power cylinder through controlling valves.

When a signal is sent to the Operator, the air valve is actuated and compressed air is admitted into the power cylinder. The compressed air drives the power cylinder piston which moves the slide assembly. A door rod and bracket attached to the slide assembly opens the door. As the door comes to a completely open position, a trip rod on the slide assembly actuates the holding Micro-Switch. When the door has reached the full open position and the signal is deactivated, the valve is de-energized - thus shutting off the air power to the cylinder. This action allows the air in the cylinder to exhaust through an adjustable port located on the air valve. The power springs or closing air then return the slide assembly to the closed position, closing the door. Checking cylinders are provided to smooth out the final opening and closing door motions.

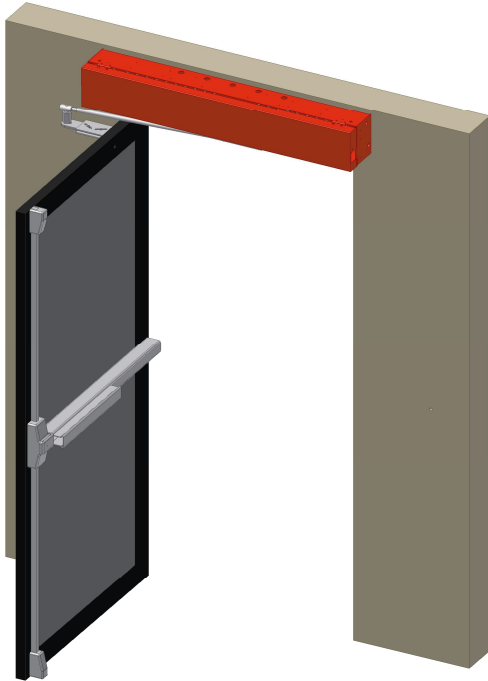


Carey Automatic Door, LLC

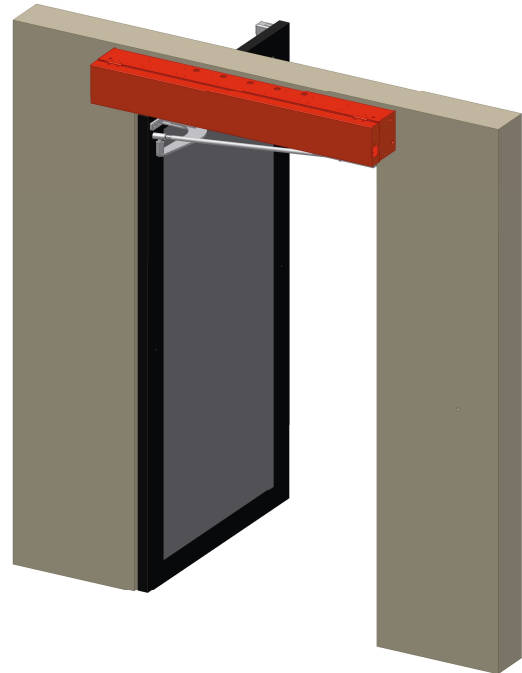
1 - PNEUMATIC OPERATOR FOR SINGLE SWINGING DOOR

“IN” for Doors Swinging under Operator

“OUT” for Doors Swinging away from Operator



Packages 1, 2 & 3



Packages 4, 5 & 6

FACTORS TO CONSIDER BEFORE ORDERING:

- HAND:** Specify Right Hand for clockwise swinging doors, Left Hand for counterclockwise swinging doors.
- REVEAL:** Distance from back of operator case to inside surface of door in closed position. Varies with door thickness and hanging. See detail sheet MDS-255 on Page CP-19 for additional information.
- SIDE CLEARANCE:** Distance required between jamb and side wall for door bracket.
- OPENING:** Determines size of operator required.
- SAFETY SWITCH:** Safety Switch 4080987 required when safety device is used.

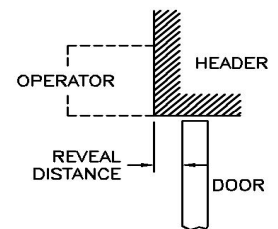
All operators shipped as single acting. Closing Valve Kit (307381, ALL AIR 940100) is available as extra for double acting. Recommended where windy conditions exist.

Emergency Release available for “IN” applications. Refer to Package No. 2.

When operator is to be concealed either above the ceiling or below the floor, consult Pages CP-6 & CP-6A for details.

CONSIDER WHETHER YOU NEED ANY OR ALL OF THE FOLLOWING:

Closing Valve Kit 307381, 940100 for Double Acting Operation; Safety Switch 408987; Controls; and Door Pivots or Hinges.



Carey Automatic Door, LLC
1 - PNEUMATIC OPERATOR FOR SINGLE SWINGING DOOR

FOR SINGLE "IN" SWINGING DOOR
For ALL AIR, See Page CP-3B

PKG NO.	PART NO.*	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE
1	307695	14" 01 IN	30" to 48"	4"	8 1/8"
2	307696	14" 01 IN w/Emergency Release	30" to 48"	4"	8 1/8"
3	307697	24" 01 IN	49" to 72"	9 1/2"	15 1/4"

PACKAGE NO. 1	PACKAGE NO. 2	PACKAGE NO. 3	ITEM DESCRIPTION
1 - 103155 (6)	1 - 103155 (6)	--	OPERATOR-OS-14" R.H. (L.H)
--	--	1 - 103159 (60)	OPERATOR-OS-24" R.H. (L.H)
1 - 403257	1- 403257	1 - 403257	SLIDE BAR - Universal
1- 502494	--	--	DOOR BRACKET - SDB-114 "IN"
--	1- 311806	--	DOOR BRACKET O17V-14" Emer Rel.
--	--	1 - 304034	DOOR BRACKET - MHO-24 "IN"
1- 409318	1- 409318	1 - 409318	DOOR ROD
1- 515430	1- 515430	1 - 515430	PLUG IN RELAY

FOR SINGLE "OUT" SWINGING DOOR
For ALL AIR, See Page CP-3B

PKG NO.	PART NO.*	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE
4	307698	14" 01 OUT	30" to 48"	4"	8 1/8"
5	307699	14" 01 OUT Wide Throw	30" to 48"	4"	8 1/8"
6	307700	24" 01 OUT	49" to 72"	8 1/2"	11 1/8"

PACKAGE NO. 4	PACKAGE NO. 5	PACKAGE NO. 6	ITEM DESCRIPTION
1 - 103155 (6)	1 - 103155 (6)	--	OPERATOR-OS-14" R.H. (L.H)
--	--	1 - 103159 (60)	OPERATOR-OS-24" R.H. (L.H)
1 - 403257	1- 403257	1 - 403257	SLIDE BAR - Universal
1- 502495	--	--	DOOR BRACKET - SDB-114 "OUT
--	1- 502891	--	DOOR BRKT-14" "OUT" Wide Throw
--	--	1 - 304040	DOOR BRACKET - MHO-24 "OUT"
1- 409318	1- 409318	1 - 409318	DOOR ROD
1- 515430	1- 515430	1 - 515430	PLUG IN RELAY

*NOTE: For LH Packages, change 2nd digit of part number to = 8.

Carey Automatic Door, LLC
1 - PNEUMATIC OPERATOR FOR SINGLE SWINGING DOOR

ALL AIR FOR SINGLE "IN" SWINGING DOOR

PKG NO.	PART NO.*	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE
1AA	347695	14" 01 IN All Air	30" to 48"	4"	8 1/8"
2AA	347696	14" 01 IN w/Emer. Release All Air	30" to 48"	4"	8 1/8"
3AA	347697	24" 01 IN All Air	49" to 72"	9 1/2"	15 1/4"

PACKAGE NO. 1AA	PACKAGE NO. 2AA	PACKAGE NO. 3AA	ITEM DESCRIPTION
1 - 103305 (6)	1 - 103305 (6)	--	OSX-14" R.H. (LH) All Air Operator
--	--	1 - 103307 (8)	OSX-24" R.H. (LH) All Air Operator
1 - 920100	1 - 920100	1 - 920100	ALL AIR VALVE PACKAGE
1 - 403257	1 - 403257	1 - 403257	SLIDE BAR - Universal
1 - 502494	--	--	DOOR BRACKET - SDB-114 "IN"
--	--	1 - 304038	DOOR BRACKET - MHO-24 "IN"
--	1 - 311806	--	EMERGENCY REL. BRACKET
1 - 409318	1 - 409318	1 - 409318	DOOR ROD
2 - 402839 OR	2 - 402839 OR	2 - 402839 OR	PULL CORD MA-10 OR
2 - 409693	2 - 409693	2 - 409693	PALM BUTTON

ALL AIR FOR SINGLE "OUT" SWINGING DOOR

PKG NO.	PART NO.*	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE
4AA	347698	14" 01 OUT All Air	30" to 48"	4"	8 1/8"
5AA	347699	14" 01 OUT w/Emer. Release All Air	30" to 48"	4"	8 1/8"
6AA	347700	24" 01 OUT All Air	49" to 72"	8 1/2"	11 1/8"

PACKAGE NO. 4AA	PACKAGE NO. 5AA	PACKAGE NO. 6AA	ITEM DESCRIPTION
1 - 103305 (6)	1 - 103305 (6)	--	OSX-14" R.H. (LH) All Air Operator
--	--	1 - 103307 (8)	OSX-24" R.H. (LH) All Air Operator
1 - 920100	1 - 920100	1 - 920100	ALL AIR VALVE PACKAGE
1 - 403257	1 - 403257	1 - 403257	SLIDE BAR - Universal
1 - 502495	--	--	DOOR BRACKET - SDB-114 "OUT"
--	1 - 502891	--	DOOR BRKT-14" OUT Wide Throw
--	--	1 - 304040	DOOR BRACKET-MHO-24 "OUT"
1 - 409318	1 - 409318	1 - 409318	DOOR ROD
2 - 402839 OR	2 - 402839 OR	2 - 402839 OR	PULL CORD MA-10 OR
2 - 409693	2 - 409693	2 - 409693	PALM BUTTON

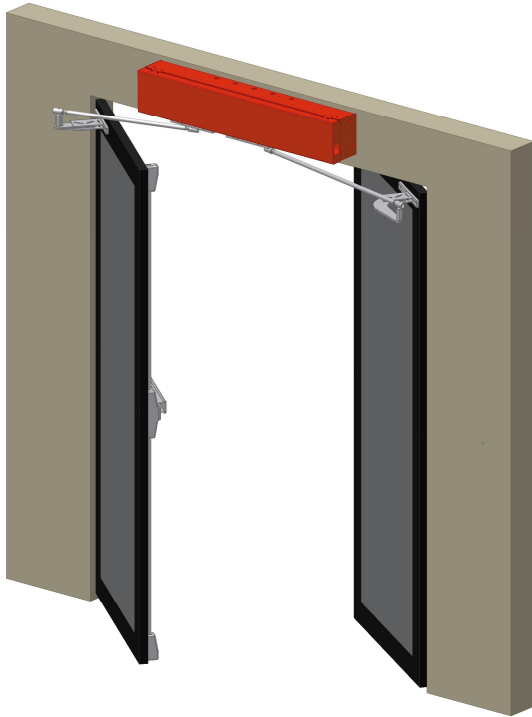
*NOTE: For LH Packages, change 2nd digit of part number to = 5.

See Page C-3 for additional ALL AIR and Explosion Proof information.

Carey Automatic Door, LLC

1 - PNEUMATIC OPERATOR FOR PAIR OF SWINGING DOORS

**One "IN" & One "OUT"
(Stack Pressure Control)**



Packages 7, 8, 9

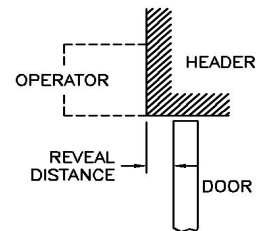
Both Swinging "IN" OR "OUT"



Packages 17, 18, 19

FACTORS TO CONSIDER BEFORE ORDERING:

- HAND:** Packages 7, 8, 9 only - when viewed from operator side if Right Hand door swings OUT and Left Hand door swings IN, order Right Hand operator. If door swings are reversed, order Left Hand operator.
- REVEAL:** Distance from back of operator case to inside surface of door in closed position. Varies with door thickness and hanging. See detail sheet MDS-255 on Page CP-19 for additional information.
- SIDE CLEARANCE:** Distance required between jamb and side wall for door bracket.
- OPENING:** Determines size of operator required.
- SAFETY SWITCH:** Safety Switch 408987 required when safety device is used.



All operators shipped as single acting. Closing Valve Kit (307381, ALL AIR 940100) is available as extra for double acting. Recommended where windy conditions exist.

Emergency Release available for "IN" applications. Refer to Packages 8 or 18.

When operator is to be concealed either above the ceiling or below the floor, consult Pages CP-6 & CP-6A for details.

CONSIDER WHETHER YOU NEED ANY OR ALL OF THE FOLLOWING:

Closing Valve Kit 307381, 940100 for Double Acting Operation; Safety Switch 408987; Controls; and Door Pivots or Hinges.

Carey Automatic Door, LLC
1 - PNEUMATIC OPERATOR FOR PAIR OF SWINGING DOORS

FOR PAIR OF SWINGING DOORS: ONE "IN" & ONE "OUT"
For ALL AIR, See Page CP-4B

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE IN	OUT
7	307701	14" 02	48" to 72"	4"	8 1/8"	8 1/8"
8	307702	14" 02 IN with Emer. Release	48" to 72"	4"	8 1/8"	8 1/8"
9	307703	24" 02	73" to 120"	8 1/2"	15 1/4"	11 1/8"

NOTE: For LH Package, change 2nd digit of part number to = 8.

PACKAGE NO. 7	PACKAGE NO. 8	PACKAGE NO. 9	ITEM DESCRIPTION
1 - 103155 (6)	1 - 103155 (6)	--	OPERATOR - OS 14" R.H. (LH)
--	--	1 - 103159 (60)	OPERATOR - OS 24" R.H. (LH)
1 - 403257	1 - 403257	1 - 403257	SLIDE BAR - Universal
1 - 502494	--	--	DOOR BRACKET - SDB-114 "IN"
1 - 502891	1 - 502891	--	DOOR BRKT 14" "OUT" Wide Throw
--	1 - 311806	--	DOOR BRKT 017V-14" Emer. Rel.
--	--	1 - 304038	DOOR BRACKET - MHO-24 "IN"
--	--	1 - 304040	DOOR BRACKET - MHO-24 "OUT"
2 - 409318	2 - 409318	1 - 409318	DOOR ROD
--	--	1 - 409319	DOOR ROD
1 - 306706	1 - 306706	1 - 306706	BALL STUD - LONG 290-48
1 - 306708	1 - 306708	--	BALL STUD - SHORT 290-50
1 - 515430	1 - 515430	1 - 515430	PLUG IN RELAY

FOR PAIR OF SWINGING DOORS: "IN" OR "OUT"
For ALL AIR, See Page CP-4B

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE IN	OUT
17	307711	14" 011 IN	48" to 72"	4"	8 1/8"	8 1/8"
18	307712	14" 011 IN w/Emergency Release	48" to 72"	4"	8 1/8"	8 1/8"
19	307713	14" 011 OUT	48" to 72"	4"	15 1/4"	11 1/8"

PACKAGE NO. 17	PACKAGE NO. 18	PACKAGE NO. 19	ITEM DESCRIPTION
1 - 103303	1 - 103303	1 - 103303	OPERATOR - 011S - 14"
2 - 502494	--	--	DOOR BRACKET SDB-114 "IN"
--	2 - 311806	--	DOOR BRKT 017V'14" Emer. Rel.
--	--	2 - 502495	DOOR BRACKET SDB-114 "OUT"
2 - 409318	2 - 409318	2 - 409318	DOOR ROD
1 - 307690	1 - 307690	1 - 307690	BALL STUD PACKAGE
1 - 515430	1 - 515430	1 - 515430	PLUG-IN RELAY

Carey Automatic Door, LLC

1 - PNEUMATIC OPERATOR FOR PAIR OF SWINGING DOORS

ALL AIR FOR PAIR OF SWINGING DOORS: ONE "IN" AND ONE "OUT"

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE	
					IN	OUT
7AA	347701	14" 02 All Air (1 In - 1 Out)	48" to 72"	4"	8 1/8"	8 1/8"
8AA	347702	14" 02 All Air (1 In w/Emer. - 1 Out)	48" to 72"	4"	8 1/8"	8 1/8"
9AA	347703	24" 02 All Air (1 In - 1 Out)	73" to 120"	8 1/2"	15 1/4"	11 1/8"

NOTE: For LH Package, change 2nd digit of part number to = 5.

PACKAGE NO. 7AA	PACKAGE NO. 8AA	PACKAGE NO. 9AA	ITEM DESCRIPTION
1 - 103305 (6)	1 - 103305 (6)	--	OSX-14" R.H. (LH) All Air Operator
--	--	1 - 103307 (8)	OSX-24" R.H. (LH) All Air Operator
1 - 920100	1 - 920100	1 - 920100	ALL AIR VALVE PACKAGE
1 - 403257	1 - 403257	1 - 403257	SLIDE BAR - Universal
1- 502494	--	--	DOOR BRACKET - SDB-114 "IN
1- 502891	1- 502891	--	DOOR BRKT 14" "OUT" Wide Throw
--	1 - 311806*	--	DOOR BRKT 017V 14" Emer. Rel.*
--	--	1 - 304038	DOOR BRACKET MHO-24 "IN"
--	--	1 - 304040	DOOR BRACKET MHO-24 "OUT"
2 - 409318	2 - 409318	1 - 409318	DOOR ROD
--	--	1 - 409319	DOOR ROD
1 - 306706	1 - 306706	1 - 306706	BALL STUD LONG
1 - 306708	1 - 306708	--	BALL STUD SHORT
2 - 402839	2 - 402839	2 - 402839	PULL CORD MA-10 OR
2 - 409693	2 - 409693	2 - 409693	PALM BUTTON

ALL AIR FOR PAIR OF SWINGING DOORS: "IN" OR "OUT"

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE	
					IN	OUT
17AA	347711	14" 011 IN	48" to 72"	4"	8 1/8"	8 1/8"
18AA	347712	14" 011 IN w/Emergency Release	48" to 72"	4"	8 1/8"	8 1/8"
19AA	347713	14" 011 OUT	48" to 72"	4"	15 1/4"	11 1/8"

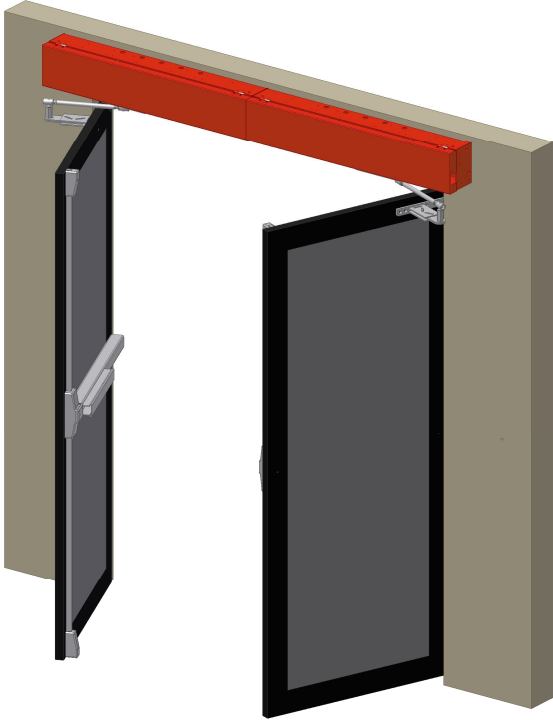
PACKAGE NO. 17AA	PACKAGE NO. 18AA	PACKAGE NO. 19AA	ITEM DESCRIPTION
1 - 103303	1 - 103303	1 - 103303	OSX-14" R.H. (L.H.) All Air Operator
1 - 920100	1 - 920100	1 - 920100	ALL AIR VALVE PACKAGE
2 - 502494	--	--	DOOR BRACKET SDB-114 "IN"
--	2 - 311806*	--	DOOR BRKT 017V'14" Emer. Rel.*
--	--	2 - 502495	DOOR BRACKET SDB-114 "OUT"
2 - 409318	2 - 409318	2 - 409318	DOOR ROD
1 - 307690	1 - 307690	1 - 307690	BALL STUD PACKAGE
2 - 402839	2 - 402839	2 - 402839	PULL CORD MA-10 OR
2 - 409693	2 - 409693	2 - 409693	PALM BUTTON

*Emergency Release (311806) cannot be used for Explosion Proof applications as electrical input is required.

See Page C-3 for additional ALL AIR and Explosion Proof information.

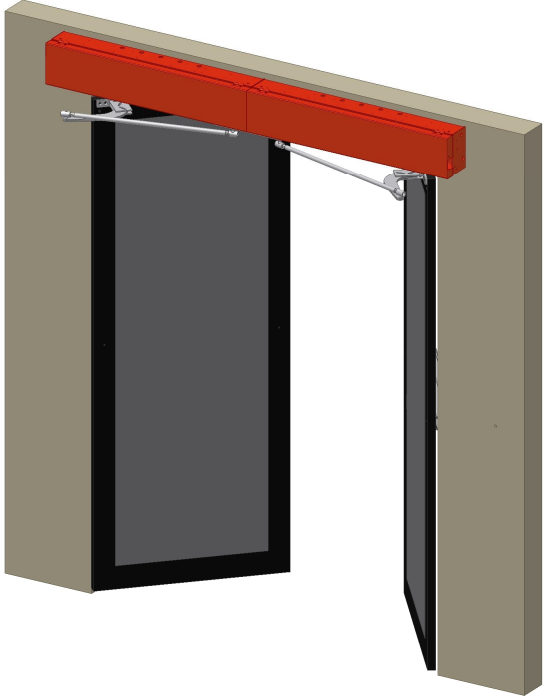
Carey Automatic Door, LLC
2 - PNEUMATIC OPERATORS FOR PAIR OF SWINGING DOORS

For Pair of "IN" Swinging Doors



Packages 10, 11 & 12

For Pair of "OUT" Swinging Doors



Packages 13, 14, 15 & 16

FACTORS TO CONSIDER BEFORE ORDERING:

- REVEAL:** Distance from back of operator case to inside surface of door in closed position. Varies with door thickness and hanging. See detail sheet MDS-255 on Page CP-19 for additional information.
- SIDE CLEARANCE:** Distance required between jamb and side wall for door bracket.
- OPENING:** Determines size of operator required.
- SAFETY SWITCH:** Safety Switch 408987 required when safety device is used.

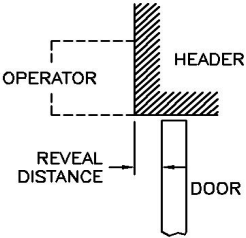
All operators shipped as single acting. Closing Valve Kit (307479, ALL AIR 940100) is available as extra for double acting. Packages 10, 11 & 12 only. Recommended where windy conditions exist.

Emergency Release available for "IN" applications. Refer to Package 11.

When operator is to be concealed either above the ceiling or below the floor, consult Pages CP-6 & CP-6A for details.

CONSIDER WHETHER YOU NEED ANY OR ALL OF THE FOLLOWING:

Closing Valve Kit 307479, 940100 for Double Acting Operation; Safety Switch 408987; Controls; and Door Pivots or Hinges.



Carey Automatic Door, LLC
2 - PNEUMATIC OPERATORS FOR PAIR OF SWINGING DOORS

FOR PAIR OF "IN" SWINGING DOORS
For ALL AIR, See Page CP-5B

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE
10	307704	14" 04 IN	54" to 96"	4"	8 1/8"
11	307705	14" 04 IN w/Emergency Release	54" to 96"	4"	8 1/8"
12	307706	24" 04 IN	85" to 144"	8 1/2"	15 1/4"

PACKAGE NO. 10	PACKAGE NO. 11	PACKAGE NO. 12	ITEM DESCRIPTION
1 - 103156	1 - 103156	--	OPERATOR OS 14" LH
1 - 103164	1 - 103164	--	OPERATOR OSS 14" RH SLAVE
--	--	1 - 103160	OPERATOR OS 24" LH
--	--	1 - 103168	OPERATOR OSS 24" RH SLAVE
2 - 403257	2 - 403257	2 - 403257	SLIDE BAR - Universal
2 - 502494	--	--	DOOR BRACKET - SDB-114 "IN
--	2 - 311806	--	DOOR BRKT 017V 14" Emer. Release
--	--	2 - 304038	DOOR BRACKET MHO-24 "IN"
2 - 409318	2 - 409318	2 - 409318	DOOR ROD
1 - 307549	1 - 307549	1 - 307550	SYNCHRONIZING FLOW CONTROL
1 - 515430	1 - 515430	1 - 515430	PLUG-IN RELAY

FOR PAIR OF "OUT" SWINGING DOORS
For ALL AIR, See Page CP-5B

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE
13	307707	14" 04 OUT S.A.	54" to 96"	4"	8 1/8"
14	307708	14" 04 OUT D.A.	54" to 96"	4"	8 1/8"
15	307709	24" 04 OUT S.A.	97" to 144"	8 1/2"	11 1/8"
16	307710	24" 04 OUT D.A.	97" TO 144"	8 1/2"	11 1/8"

PKG NO. 13	PKG NO. 14	PKG NO. 15	PKG NO. 16	ITEM DESCRIPTION
1 - 307983	--	--	--	Operator 14" Special Single Acting Master
1 - 307984	--	--	--	Operator 14" Special Single Acting Slave
--	1 - 307987	--	--	Operator 14" Special Double Acting Master
--	1 - 307988	--	--	Operator 14" Special Double Acting Slave
--	--	1 - 307985	--	Operator 24" Special Single Acting Master
--	--	1 - 307986	--	Operator 24" Special Single Acting Slave
--	--	--	1 - 307989	Operator 24" Special Double Acting Master
--	--	--	1 - 307990	Operator 24" Special Double Acting Slave
2 - 403257	2 - 403257	2 - 403257	2 - 403257	SLIDE BAR - Universal
1 - 307549	1 - 307549	1 - 307550	1 - 307550	SYNCHRONIZING FLOW CONTROL
2 - 409318	2 - 409318	2 - 409318	2 - 409318	DOOR ROD
2 - 502891	2 - 502891	--	--	DOOR BRACKET 14" "OUT" Wide Throw*
--	--	2 - 304040	2 - 304040	DOOR BRACKET 24" "OUT"
1 - 515430	1 - 515430	1 - 515430	1 - 515430	PLUG-IN RELAY

*Note: If other than swing clear hinges are used, specify 502495 "OUT" Brackets on order.

Carey Automatic Door, LLC
2 - PNEUMATIC OPERATORS FOR PAIR OF SWINGING DOORS

ALL AIR FOR PAIR OF "IN" SWINGING DOORS

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE
10AA	347704	14" 04 IN ALL AIR	54" to 96"	4"	8 1/8"
11AA	347705	14" 04 IN w/Emer. Release ALL AIR	54" to 96"	4"	8 1/8"
12AA	347706	24" 04 IN ALL AIR	85" to 144"	8 1/2"	15 1/4"

PACKAGE NO. 10AA	PACKAGE NO. 11AA	PACKAGE NO. 12AA	ITEM DESCRIPTION
1 - 103305	1 - 103305	--	OSX - 14" R.H. ALL AIR OPERATOR
1 - 103306	1 - 103306	--	OSX - 14" L.H. ALL AIR OPERATOR
--	--	1 - 103307	OSX - 24" R.H. ALL AIR OPERATOR
--	--	1 - 103308	OSX - 24" L.H. ALL AIR OPERATOR
1 - 920100	1 - 920100	1 - 920100	ALL AIR VALVE PACKAGE
2 - 403257	2 - 403257	2 - 403257	SLIDE BAR - UNIVERSAL
2 - 502494	--	--	DOOR BRACKET - SDB-114 "IN"
--	2 - 311806	--	DOOR BRKT 017V 14" Emer. Release*
--	--	2 - 304038	DOOR BRACKET MHO-24 "IN"
2 - 409318	2 - 409318	2 - 409318	DOOR ROD
1 - 970105	1 - 970105	1 - 970105	SYNCHRONIZING FLOW CONTROL
2 - 402839	2 - 402839	2 - 402839	PULL CORD MA-10 OR
2 - 409693	2 - 409693	2 - 409693	PALM BUTTON

*Emergency Release (311806) cannot be used for Explosion Proof applications as electrical input is required.

ALL AIR FOR PAIR OF "OUT" SWINGING DOORS

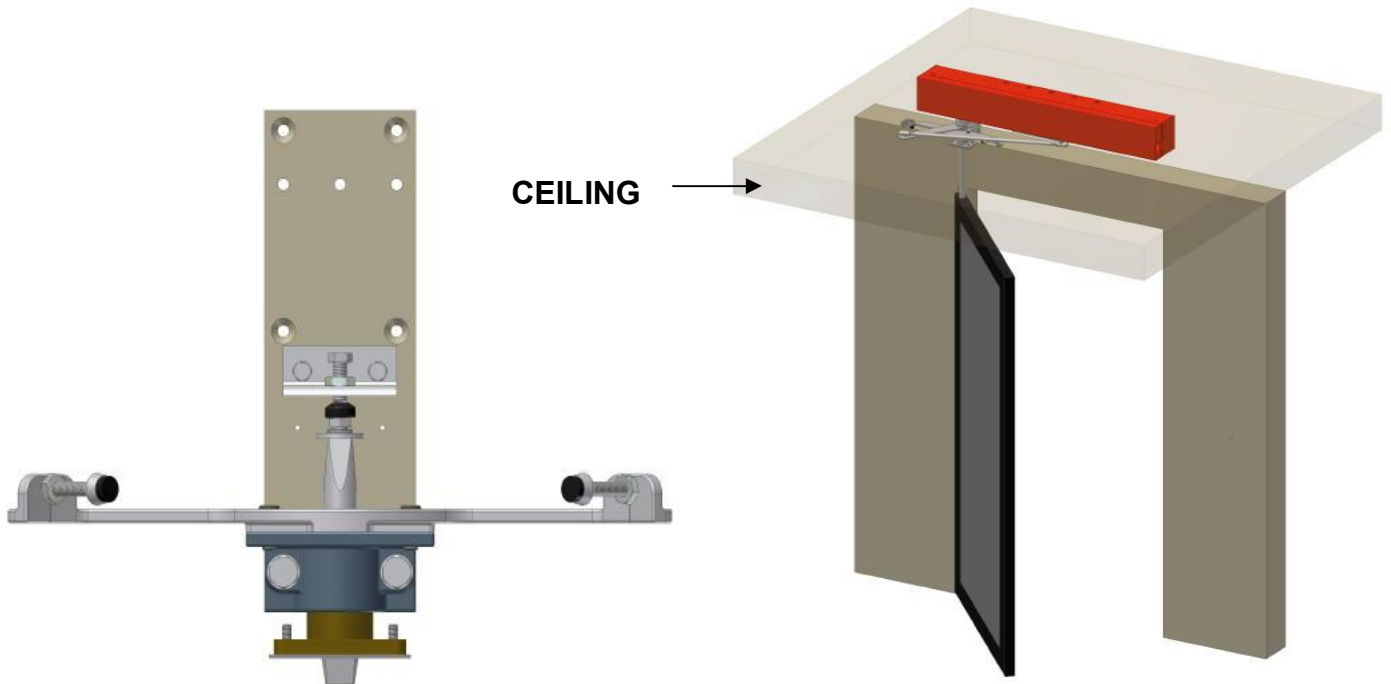
PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE
13AA	347707	14" 04 OUT ALL AIR	54" to 96"	4"	8 1/8"
15AA	347709	24" 04 OUT ALL AIR	97" to 144"	8 1/2"	11 1/8"

PKG NO. 13AA	PKG NO. 15AA	ITEM DESCRIPTION
1 - 103305	--	OSX - 14" R.H. ALL AIR OPERATOR
1 - 103306	--	OSX - 14" L.H. ALL AIR OPERATOR
--	1 - 103307	OSX - 24" R.H. ALL AIR OPERATOR
--	1 - 103308	OSX - 24" L.H. ALL AIR OPERATOR
1 - 920100	1 - 920100	ALL AIR VALVE PACKAGE
2 - 403257	2 - 403257	SLIDE BAR - UNIVERSAL
2 - 502495	--	DOOR BRACKET - SDB - 114 "OUT"
--	2 - 304039	DOOR BRACKET MHO - 24" "OUT"
2 - 409318	2 - 409318	DOOR ROD
1 - 970105	1 - 970105	SYNCHRONIZING FLOW CONTROL
2 - 402839	2 - 402839	PULL CORD MA-10 OR
2 - 409693	2 - 409693	PALM BUTTON

See Page C-3 for additional ALL AIR and Explosion Proof information.

Carey Automatic Door, LLC
1 - PNEUMATIC OPERATOR FOR SWINGING DOOR - CONCEALED

MAGIC STAR



Packages 20, 21, 22, 23

SHAFT LENGTH	CLEARANCE DOOR TOP TO OPERATOR TOP
6-5/32"	15"
7-3/8"	16-1/4"
10-3/8"	19-1/4"
16-3/8"	25-1/4"
22-3/8"	31-1/4"
38-3/8"	37-1/4"
34-3/8"	43-1/4"
39-3/8"	48-1/4"

FACTORS TO CONSIDER BEFORE ORDERING:

- HAND:** Specify Right Hand for clockwise swinging doors,
Left Hand for counterclockwise swinging doors.
- OPENING:** Determines size of operator required.
- SAFETY SWITCH:** Safety Switch 408987 required when safety device is used.

All operators shipped as single acting. Closing Valve Kit (307381, ALL AIR 940100) is available as extra for double acting. Recommended where windy conditions exist.

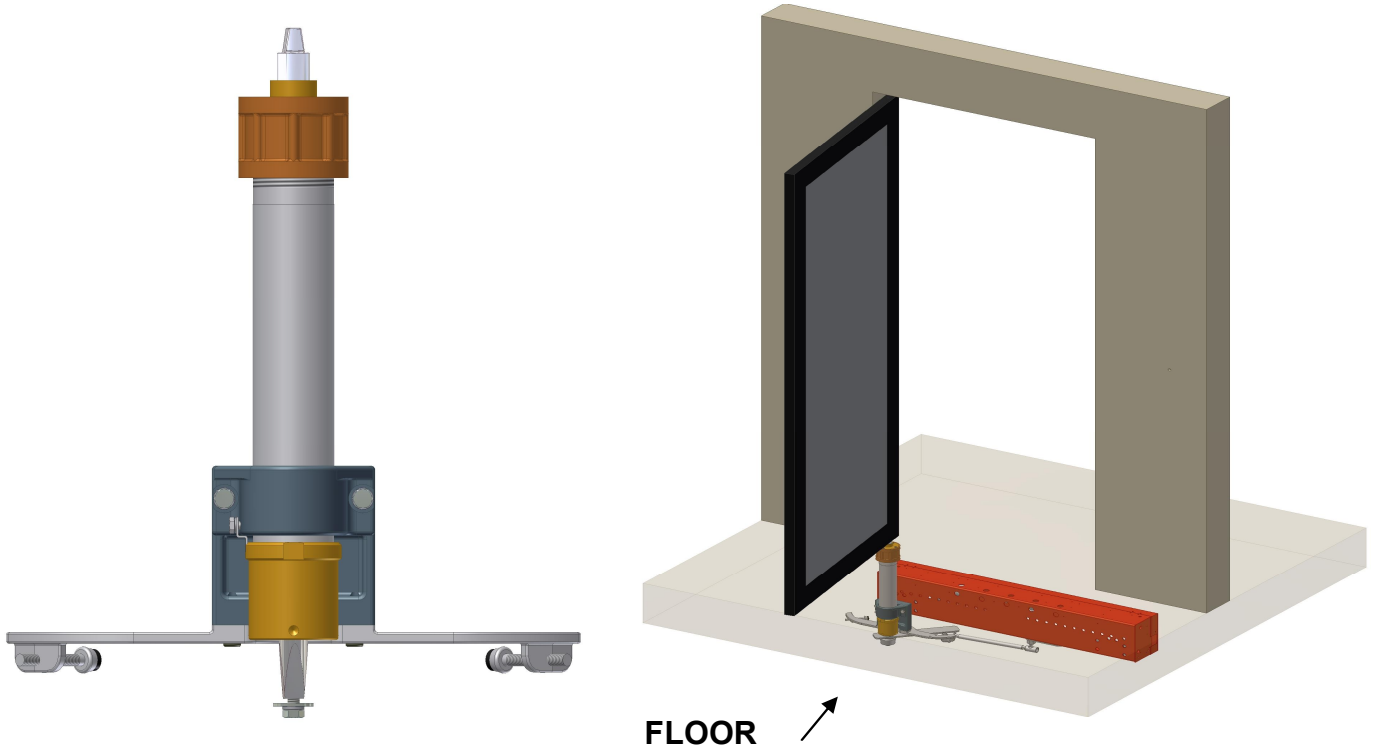
Emergency Release available for "IN" applications. Refer to Packages 21, 23, 25 & 27.

CONSIDER WHETHER YOU NEED ANY OR ALL OF THE FOLLOWING:

Closing Valve Kit 307381, 940100 for Double Acting Operation; Safety Switch 408987; Controls; and Door Pivots or Hinges.

Carey Automatic Door, LLC
1 - PNEUMATIC OPERATOR FOR SWINGING DOOR - CONCEALED

MAGIC MOLE



Packages 24, 25, 26, 27

SHAFT LENGTH	FLOOR THICKNESS
20-9/16"	Up to 7-1/2" Inclusive
26-9/16"	Over 7-1/2" to 13-1/2" Inclusive
32-9/16"	Over 13-1/2" to 19-1/2" Inclusive
38-9/16"	Over 19-1/2" to 25-1/2" Inclusive
44-9/16"	Over 25-1/2" to 31-1/2" Inclusive

FACTORS TO CONSIDER BEFORE ORDERING:

- HAND:** Specify Right Hand for clockwise swinging doors,
Left Hand for counterclockwise swinging doors.
- OPENING:** Determines size of operator required.
- SAFETY SWITCH:** Safety Switch 408987 required when safety device is used.

All operators shipped as single acting. Closing Valve Kit (307381, ALL AIR 940100) is available as extra for double acting. Recommended where windy conditions exist.

Emergency Release available for "IN" applications. Refer to Packages 21, 23, 25 & 27.

CONSIDER WHETHER YOU NEED ANY OR ALL OF THE FOLLOWING:

Closing Valve Kit 307381, 940100 for Double Acting Operation; Safety Switch 408987; Controls; and Door Pivots or Hinges.

Carey Automatic Door, LLC

1 - PNEUMATIC OPERATOR FOR SWINGING DOOR - CONCEALED

OPERATOR CONCEALED OVERHEAD

For ALL AIR Pkgs. 20 & 21, See Page CP-6C

Star Pivot Length, See Page CP-6

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING
20	307714	14" 01 STAR	30" to 48"
21	307715	14" 01 STAR w/Emergency Release	30" to 48"
22*	307716	14" 011 STAR Pair of Doors	48" to 72"
23*	307717	14" 011 STAR Pair of Doors w/Emergency Release	48" to 72"

Note: For Pkg. 20 & 21 only - LH Package change 2nd digit to = 8

*Packages 22 & 23 Handle a Pair of Doors

PKG NO. 20	PKG NO. 21	PKG NO. 22	PKG NO. 23	ITEM DESCRIPTION
1 - 103155 (6)	1 - 103155 (6)	--	--	OPERATOR OS 14" RH (LH)
--	--	1 - 103303	1 - 103303	OPERATOR O11S 14"
1 - 402121	--	2 - 402121	--	LEVER
--	1 - 406234	--	2 406234	LEVER - Emergency Release 017S - 14"
1 - 402371	1 - 402371	2 - 402371	2 - 402371	DOOR ARM - STAR
1 - 409318	1 - 409318	2 - 409318	2 - 409318	DOOR ROD
1 - 403257	1 - 403257	--	--	SLIDE BAR - Universal
--	--	1 - 307690	1 - 307690	BALL STUD PACKAGE
1 - 405113	1 - 405113	1 - 405113	2 - 405113	PIVOT - BOTTOM
--	1 - 402923	--	2 - 402923	EMERGENCY CUTOFF SWITCH
1 - SPECIFY	1 - SPECIFY	1 - SPECIFY	1 - SPECIFY	PIVOT - 102126 specify length below
1 - 515430	1 - 515430	1 - 515430	1 - 515430	PLUG-IN RELAY

OPERATOR CONCEALED UNDER FLOOR

For ALL AIR Pkgs. 24 & 25, See Page CP-6C

Mole Pivot Length, See Page CP-6A

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING
24	307718	14" 01 MOLE	30" to 48"
25	307719	14" 01 MOLE w/Emergency Release	30" to 48"
26*	307720	14" 011 MOLE Pair of Doors	48" to 72"
27*	307721	14" 011 MOLE Pair of Doors w/Emergency Release	48" to 72"

Note: For Pkg. 24 & 25 only - LH Package change 2nd digit to = 8

*Packages 26 & 27 Handle a Pair of Doors

PKG NO. 24	PKG NO. 25	PKG NO. 26	PKG NO. 27	ITEM DESCRIPTION
1 - 103155 (6)	1 - 103155 (6)	--	--	OPERATOR OS 14" RH (LH)
--	--	1 - 103303	1 - 103303	OPERATOR O11S 14"
1 - 402121	--	2 - 402121	--	LEVER - 014 ML
--	1 - 406234	--	2 - 406234	LEVER - Emergency Release 017M - 14"
1 - 502651	1 - 502651	2 - 502651	2 - 502651	DOOR ARM
1 - 310079	1 - 310079	2 - 310079	2 - 310079	PIVOT - TOP
1 - 409318	1 - 409318	2 - 409318	2 - 409318	DOOR ROD
1 - 403257	1 - 403257	--	--	SLIDE BAR - Universal
--	--	1 - 307690	2 - 307690	BALL STUD PACKAGE
--	1 - 402923	--	2 - 402923	EMERGENCY CUTOFF SWITCH
1 - SPECIFY	1 - SPECIFY	2 - SPECIFY	2 - SPECIFY	PIVOT - 103030 specify length below
1 - 515430	1 - 515430	1 - 515430	1 - 515430	PLUG-IN RELAY

Carey Automatic Door, LLC
1 - PNEUMATIC OPERATOR FOR SWINGING DOOR - CONCEALED

ALL AIR OPERATOR CONCEALED OVERHEAD
STAR Pivot Length, See Page CP-6

PKG NO.	PART NO.*	DESCRIPTION	SIZE OF OPENING
20AA	347714	14" 01 STAR All Air	30" to 48"
21AA	347715	14" 01 STAR w/Emergency Release All Air	30" to 48"

PACKAGE NO. 20AA	PACKAGE NO. 21AA	ITEM DESCRIPTION
1 - 103305 (6)	1 - 103305 (6)	OSX - 14" RH (LH) ALL AIR OPERATOR
1 - 920100	1 - 920100	ALL AIR VALVE PACKAGE
1 - 402121	--	LEVER - O14SL
--	1 - 406234*	LEVER - Emergency Release 017S-14**
1 - 402371	1 - 402371	DOOR ARM - STAR
1 - 409318	1 - 409318	DOOR ROD
1 - 403257	1 - 403257	SLIDE BAR - Universal
1 - 405113	1 - 405113	FERGUSON BOTTOM PIVOT
--	1 - 402923*	EMERGENCY CUTOFF SWITCH**
1 - 102126	1 - 102126	STAR PIVOT - Specify proper length from table
2 - 402839	2 - 402839	PULL CORD MA-10 OR
2 - 409693	2 - 409693	PALM BUTTON

ALL AIR OPERATOR CONCEALED UNDER FLOOR
MOLE Pivot Length, See Page CP-6A

PKG NO.	PART NO.*	DESCRIPTION	SIZE OF OPENING
24AA	347718	14" 01 MOLE All Air	30" to 48"
25AA	347719	14" 01 MOLE w/Emergency Release All Air	30" to 48"

PACKAGE NO. 24AA	PACKAGE NO. 25AA	ITEM DESCRIPTION
1 - 103305 (6)	1 - 103305 (6)	OSX - 14" RH (LH) ALL AIR OPERATOR
1 - 920100	1 - 920100	ALL AIR VALVE PACKAGE
1 - 402121	--	LEVER - O14ML
--	1 - 406234*	LEVER - Emergency Release 017M-14**
1 - 502651	1 - 502651	DOOR ARM
1 - 310079	1 - 310079	TOP PIVOT
1 - 409318	1 - 409318	DOOR ROD
1 - 403257	1 - 403257	SLIDE BAR - Universal
--	1 - 402923*	EMERGENCY CUTOFF SWITCH**
1 - 103030	1 - 103030	MOLE PIVOT - Specify proper length from table
2 - 402839	2 - 402839	PULL CORD MA-10 OR
2 - 409693	2 - 409693	PALM BUTTON

*NOTE: For LH Packages, change 2nd digit of part number to = 5.

**Emergency Release Lever (406234) and Emergency Cutoff Switch (402923) cannot be used for Explosion Proof applications as electrical input is required.

See Page C-3 for additional ALL AIR and Explosion Proof information.

Carey Automatic Door, LLC

1 - PNEUMATIC OPERATOR FOR SWINGING FIRE DOORS

The Automatic Swinging Fire Door Package has been previously tested to meet the Provisions of the National Fire Protection Association Standards 80 and 101. The Package fills a need required by Life Safety Codes in hospitals, nursing homes, industrial plants, institutions, office buildings and schools.

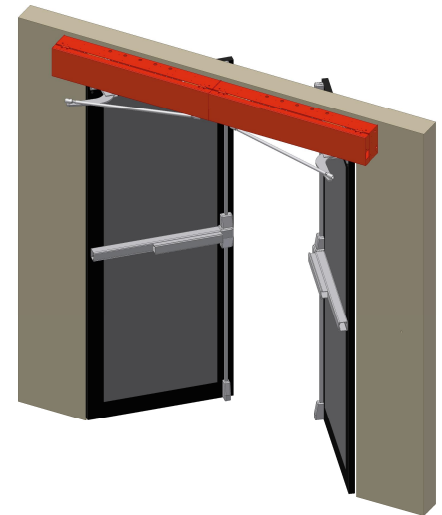
**Double Egress
Package 55**



**Perimeter "IN"
Package 56**



**Perimeter "OUT"
Package 57**



FACTORS TO CONSIDER BEFORE ORDERING:

DOUBLE EGRESS: Two doors swinging in opposite direction. "A" labeled with Astragal; "B" labeled without Astragal.

PERIMETER: Doors swinging in same direction (either IN or OUT). "B" labeled Doors Only.

FOR INFORMATION ON INSTALLATION DETAILS AND WIRING, REFER TO: DETAIL SHEET P-97 (MDS-445)

FOR A COMPLETE PACKAGE, THE FOLLOWING EQUIPMENT MUST BE ORDERED:

FIRE DOOR PACKAGES Nos. 55, 56 OR 57	Page CP-12A
FIRE EXIT HARDWARE	By Others
CONTROLS	By Others
SMOKE AND HEAT DETECTOR	By Others
CONTROL BOX	By Others
DOORS (Sizes as indicated)	From any approved fire door mfg. company
Specify Class "A" or "B" UL Listed Doors Only	
Prepare for CB-1901, 5" x 4 1/2" Hinges and Fire Door Exit Hardware	
Door Hardware and Fire Door Latch (Or Equivalent)	

U.L. LISTED DOOR SIZES:

OPENING HEIGHT: 6' - 8" TO 8' - 0"
In 2" Increments

OPENING WIDTH: 6' - 0" TO 8' - 0"
In 4" Increments

Carey Automatic Door, LLC
1 - PNEUMATIC OPERATOR FOR SWINGING FIRE DOORS

SWINGING FIRE DOORS

PKG NO.	PART NO.	DESCRIPTION	SIZE OF OPENING	MAX. REVEAL SEE MDS-255	SIDE CLEARANCE
55	310267	14" DOUBLE EGRESS (Specify Oper. Hand)	72" - 96"	4"	8 1/8"
56	310268	14" PERIMETER "IN"	72" - 96"	—	8 1/8"
57	310269	14" PERIMETER "OUT"	72" - 96"	4"	8 1/8"

PKG NO. 55	PKG NO. 56	PKG NO. 57	ITEM DESCRIPTION
2 - 103155 OR	1 - 103155	1 - 103155	OPERATOR OS 14" RH Pneumatic Operator
2 - 103156	1 - 103156	1 - 103156	OPERATOR OS 14" LH Pneumatic Operator
2 - 403257	2 - 403257	2 - 403257	SLIDE BAR UNIVERSAL
1 - 502494	2 - 502494	--	DOOR BRACKET SDB - 114 IN
1 - 502495	--	2 - 502495	DOOR BRACKET SDB - 114 OUT
1 - 409318	2 - 409318	2 - 409318	DOOR ROD
2 - 515430	2 - 515430	2 - 515430	PLUG IN RELAY

Carey Automatic Door, LLC, its employees and associates are not architects, electrical engineers, sensor experts or building code experts. Automatic doors if not installed or maintained properly can cause serious bodily injury. Always consult the proper experts before purchasing a fire door application.