



PROJECT GUIDE

Builders Series Elevator

Series F028 - 500 lbs.

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Members Of:

Fox Valley Elevator, LLC is a proud member of The American Society of Mechanical Engineers, The National Association of Elevator Contractors, The Canadian Elevator Contractors Association and The Accessibility Equipment Manufacturers Association. These organizations are symbols assure you of our commitment to high quality and accessibility to everyone.



Canadian Elevator
Contractors Association

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Introduction

This Project Guide is to be used as a template and order form to achieve proper elevator planning and jobsite preparation. This guide may be used by the architect, contractor, dealer, or homeowner. The information in this guide will have specifications that must be followed in conjunction with your job specific drawings.

Elevator installation is to be completed by an authorized elevator contractor and in accordance with installation instructions provided by the manufacturer. Installation must also be in compliance with requirements of the National Electrical Code, the American Society of Mechanical Engineers Safety Code, and state and local building codes. Fox Valley Elevator, LLC products are designed to meet the residential elevator requirements of ASME A17.1 Safety Code for Elevators and Escalators. The manufacturer assumes no liability for equipment not installed in compliance with these codes.

Fox Valley Elevator, LLC reserves the right to modify the design, technical specifications and dimensions of the products shown in this document.

Planning Steps

Congratulations on choosing Fox Valley Elevators Builders Series. If you're interested in other options outside of this project guide, please reference Fox Valley Elevator's other planning guides and brochures. Complete the steps below to finalize your elevator package:

1. Locate a local authorized dealer.
2. Layout machine room, hoistway location, and car configuration.
3. Plan for electrical requirements.
4. Address national, state, and local code requirements.
5. Obtain and follow site specific field drawings. Forward all necessary documents to contractor/builder, architect, and the structural engineers. Use job specific drawings while building hoistway, doorways, machine room, and any other construction related to the elevator.
6. Coordinate with your authorized dealer to install your elevator.

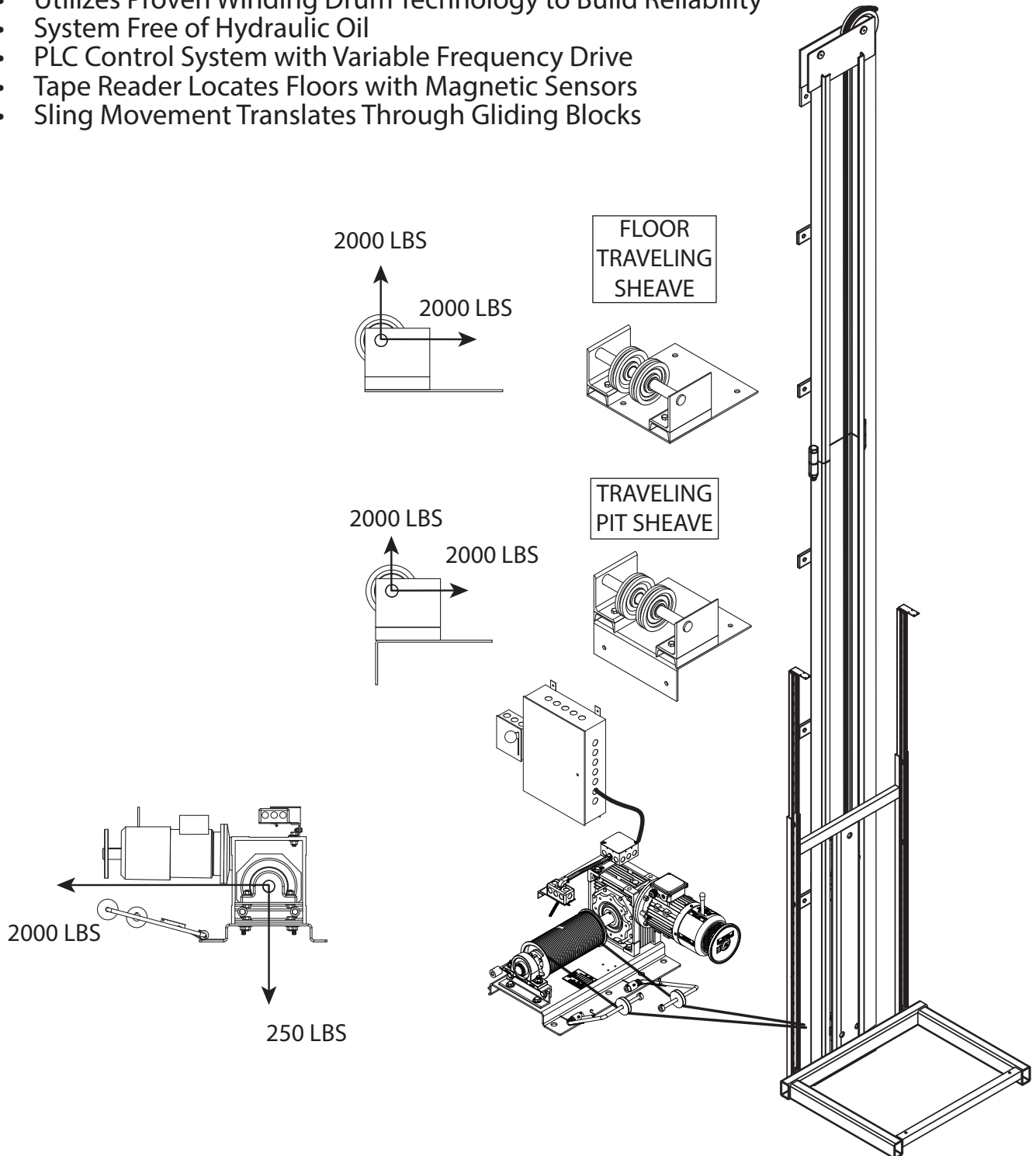
Fox Valley Elevator, LLC will be referred to as Fox Valley Elevator or FVE throughout the remainder of this document.

Design Features & Mechanical Illustrations

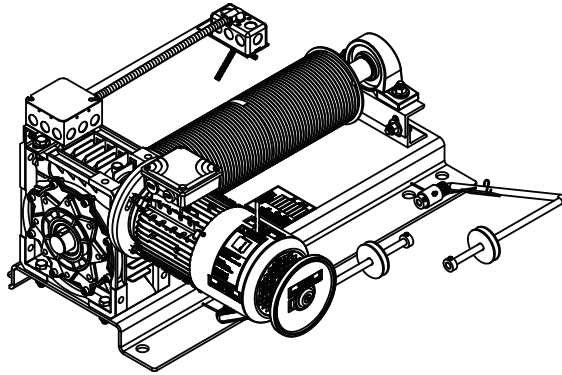
C-Rail System with Winding Drum Technology

(Series F028)

- Modular Design Built on C-Rail System
- Utilizes Proven Winding Drum Technology to Build Reliability
- System Free of Hydraulic Oil
- PLC Control System with Variable Frequency Drive
- Tape Reader Locates Floors with Magnetic Sensors
- Sling Movement Translates Through Gliding Blocks



Elevator Equipment - Series F028



Powerhead

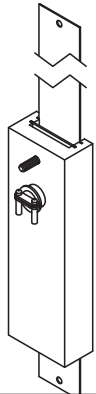
The powerhead is a motor and gearbox that efficiently moves the elevator car by a positive means of wrapping a steel wire rope around a grooved drum.

Gearbox

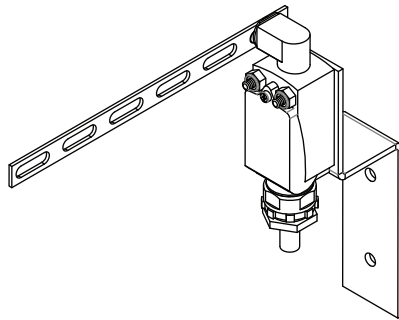
Single reduction sealed gearbox for reduced maintenance.

Motor

230V 3-phase brake motor for efficiency, higher torque, speed control, and landing accuracy.



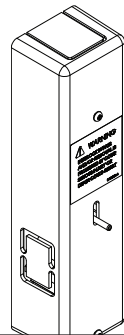
TAPE READER



FINAL LIMIT SWITCH

Stopping Devices

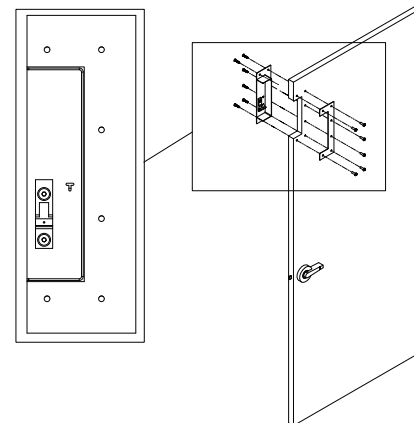
Magnetic tape reader for leveling accuracy & final limit switches.



EMI IV
(Residential Only)

Hoistway Door Interlocks

To prevent the opening of the hoistway door unless the car is within landing zone or stopped at landing.



Recess Kit (Optional)

Product that will allow a jamb mounted EMI IV to meet the current 3/4"-4" rule.

Hoistway Specifications - Series F028

ATTENTION CONSTRUCTION CONTRACTOR:

Job specific documentation for hoistway construction from Fox Valley Elevator will be provided to your local authorized dealer.

Hoistway Construction Requirements to be completed prior to elevator installation by contractor.

1. Electrical Requirements By Others:

- Dedicated 230 VAC 60 Hertz 35 AMP Circuit Single Phase with ground and neutral,
- A fused lockable disconnect switch with branch 3 pole circuit wire to suit a 30 AMP service, fused for 30 AMP dual element (time delay fuse) with neutral.
- Dedicated 115 Volt, 15 AMP single phase circuit for car lighting and auxillary circuits.
- Electrical wiring to comply with applicable codes.
- Any VAC other than 230 VAC may require a buck/boost transformer.

NOTE :

Electrical requirements are for general reference only. All job specific electrical requirements must be acquired from job specific drawings provided by Fox Valley Elevator.

- 2. Unfinished/Un-installed Door** - Installation company may prefer a minimum of one hoistway door and associated framing be left unfinished/uninstalled to accommodate elevator installation equipment and to prevent accidental damage to the door and framing (preferably at grade level).
- 3. Plumb and Square Hoistway** - Hoistway must be plumb within 1/8 inch per 10 feet of height and square at any point within 1/4 inch based on difference in diagonal measurements.
- 4. Supportive Structure** - Structure must be capable of supporting the appropriate loads. Local engineering support is recommended.
- 5. Telephone Connection** - Code requires a telephone connection to the elevator car; therefore, a phone line must be installed leading to the controller. It must also be capable of working for 4 hours during a power outage.
- 6. ASME A17.1 Section 5.3** - Hoistway to be constructed in accordance with ASME A17.1 section 5.3 and all local codes.
- 7. Hoistway Door Security (Interlocks)** - All hoistway doors require interlocks as well as a door handle and a latch set. Interlocks will be installed by the elevator installers. Fox Valley Elevator requires the use of solid core doors and recommends spring door hinges.
- 8. Machinery Space, Machine Rooms, Control Spaces, and Control Rooms Layouts & Wiring** - All operating equipment must meet National Electrical Code and all local codes. Machine space must have a decicated convenience outlet and light with switch. The temperatures must be maintained between 60°- 110°F (15°C- 43°C) and must not be exposed to the elements with a max relative humidity of 90% (non-condensing).
- 9. No Alterations** - Any alterations to the equipment without written authorization by Fox Valley Elevator will void all warranties.
- 10. Pit Floor Strength** - A pit floor must be designed to withstand a load of 4,000 lbs. When used, concrete must be a minimum of 4" thick and rated at 3500 PSI.
- 11. Rated Load** - Elevator system is rated for maximum capacity from the factory. Flooring, trim, and/or permanent decor added to elevator car must be subtracted from car capacity.
- 12. Verify Code Requirements** - Verify that national, state, and local code requirements are all met before installation.

Machinery Spaces, Machine Rooms, Control Spaces, and Control Rooms Layouts & Wiring

(Series F028)

Disconnect Power Before Wiring

- Locate controller enclosure in the machine room as required by code.
- Wire gauge requirements:
 - 10 gauge wire for power and motor wiring
 - 14 gauge minimum wire for lighting and aux circuits
 - 18 gauge wire for all low voltage
 - Note:** *Copper wire only.*
- Refer to unit specific schematics and field drawings to complete wiring.
Wire per N.E.C. and local codes.

Note: Not all controller terminals or travel cable wires may be used. High voltage and low voltage wires must run separate and only cross over perpendicular to each other.

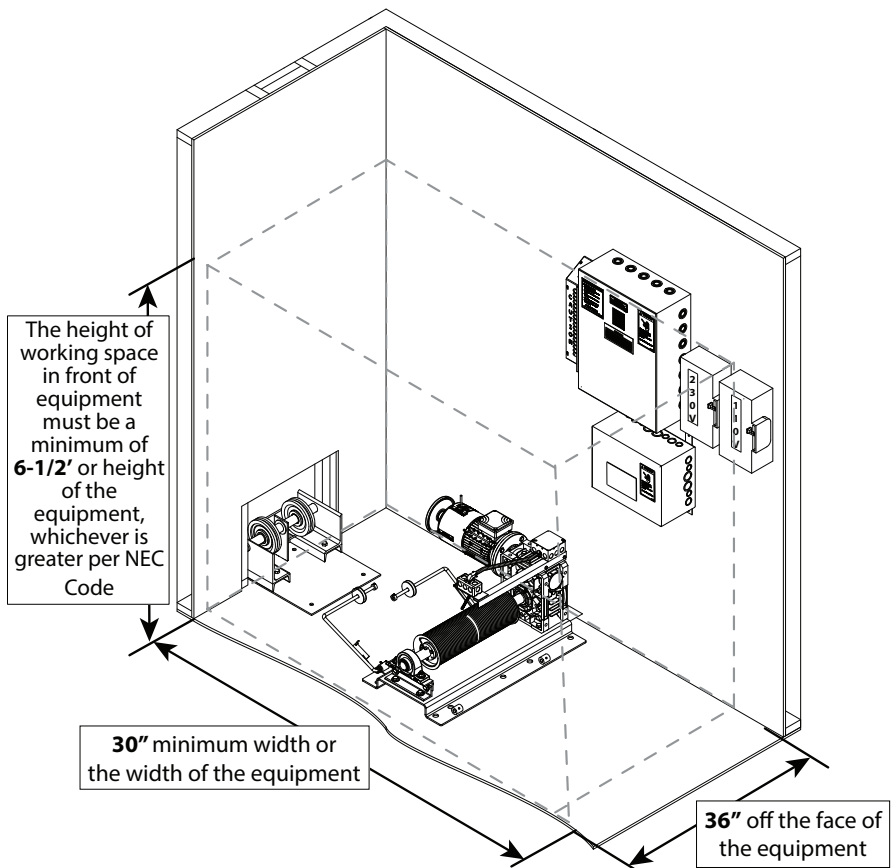
- Locate and check for correct fuse sizes.

Per NEC Code 110.26

Clear Working Space. The working space required by this section must be clear at all times. **Therefore, this space isn't permitted for storage.** When normally enclosed live parts are exposed for inspection or servicing, the working space, if in a passageway or general open space, must be suitably guarded.

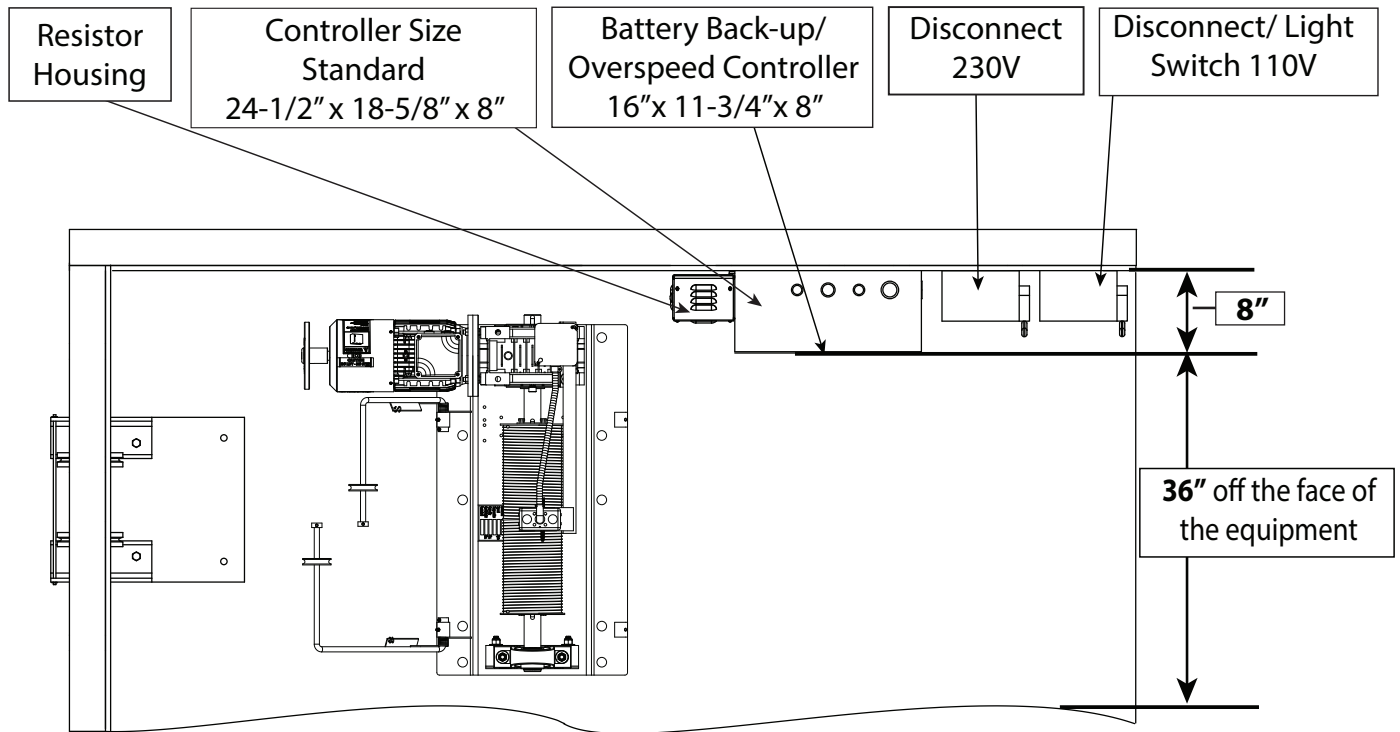
Working Space. Equipment that may need examination, adjustment, servicing, or maintenance while energized must have working space provided in accordance with (1), (2), and (3):

1. Depth of Working Space. The working space, which is measured from the enclosure front, must not be less than the distance of 36".
2. Width of Working Space. The width of the working space must be a minimum of 30", but in no case less than the width of the equipment.



Machinery Spaces, Machine Rooms, Control Spaces, and Control Rooms Layouts & Wiring

(Series F028)



Per NEC Code 110.26 Continued

3. Height of Working Space (Headroom). The height of the working space in front of equipment must not be less than 6½' or the height of the equipment measured from the floor, grade or platform, whichever is greater.

Other equipment must not extend more than 6" into the controller working space.

Additional Notes

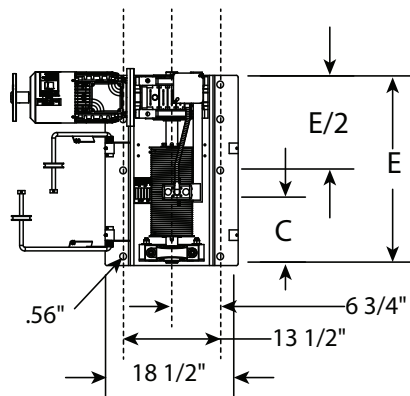
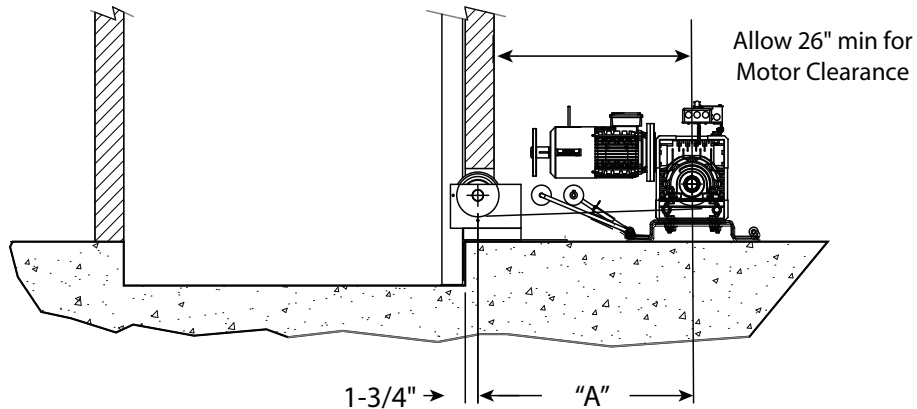
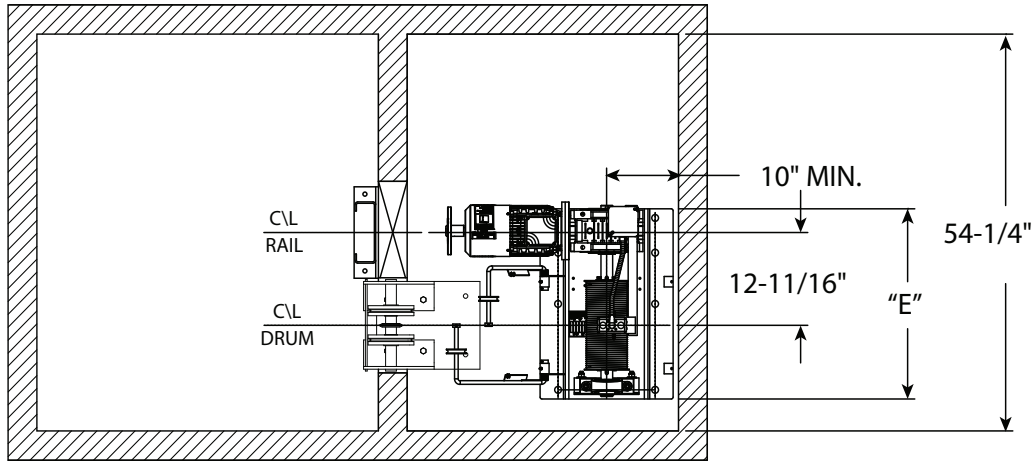
- A lockable service disconnect must be placed within sight of the controller and must be easily accessible in case of an emergency.
- Machine room and controller space must contain a convenience outlet and light with switch.
- The temperatures must be maintained between 60°- 110°F (15°C- 43°C) and must not be exposed to the elements with a max relative humidity of 90% (non-condensing).
- The frequency drive may be heard running for thermal heat dissipation at any time.

Machinery Spaces, Machine Rooms, Control Spaces, and Control Rooms Layouts & Wiring

(Series F028)

TYPICAL MACHINE ROOM LAYOUT (FLOOR MOUNT)

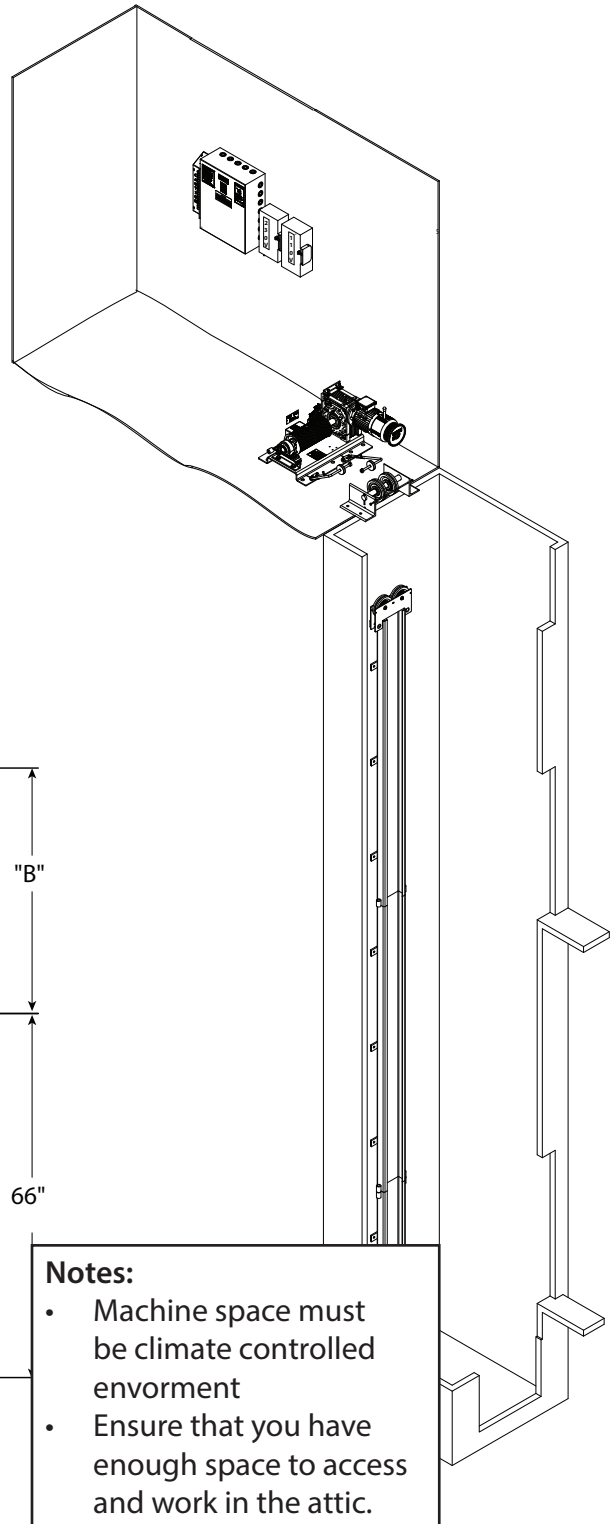
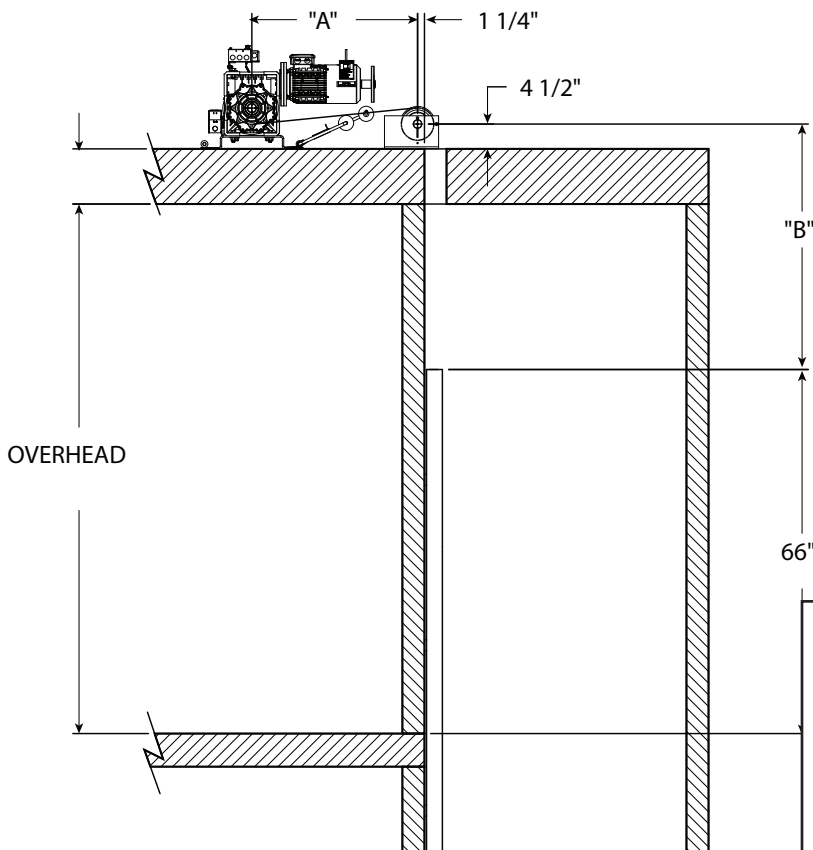
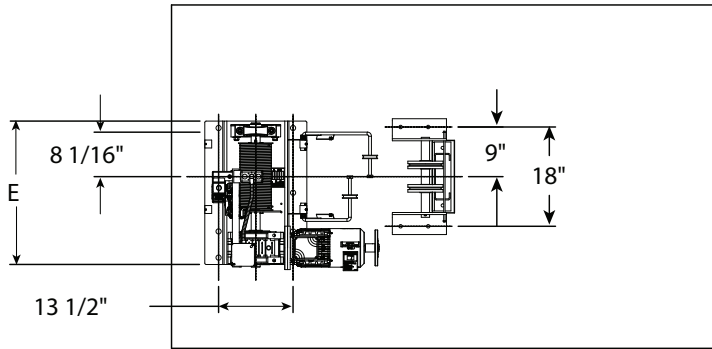
TRAVEL	<14'	<24'	<32'
DRUM LENGTH	8"	12"	15"
DRUM C/L DIST. "C"	8.25"	10"	12.25"
MACH. BASE "E"	22"	26"	29"
MINIMUM FOR "A"	30"	30"	30"



Machinery Spaces, Machine Rooms, Control Spaces, and Control Rooms Layouts & Wiring

TYPICAL MACHINE ROOM LAYOUT (BEHIND RAIL ATTIC MOUNT)

TRAVEL (FEET)	<14	<24	<32
DRUM LENGTH (IN)	8"	12"	15"
MIN. "A" + "B" (IN)	57"	86"	107"
MACH. BASE "E"	22"	26"	29"
MINIMUM FOR "A" (IN)	30"	30"	30"



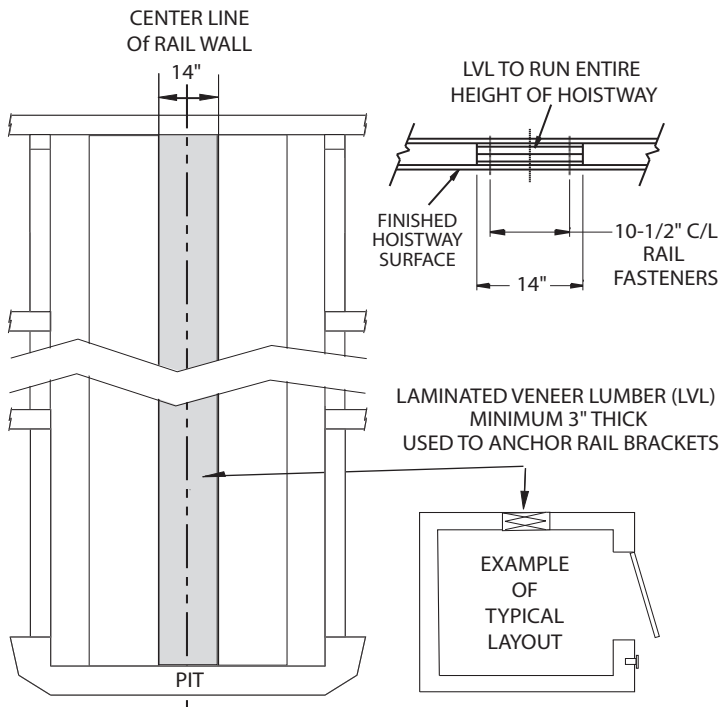
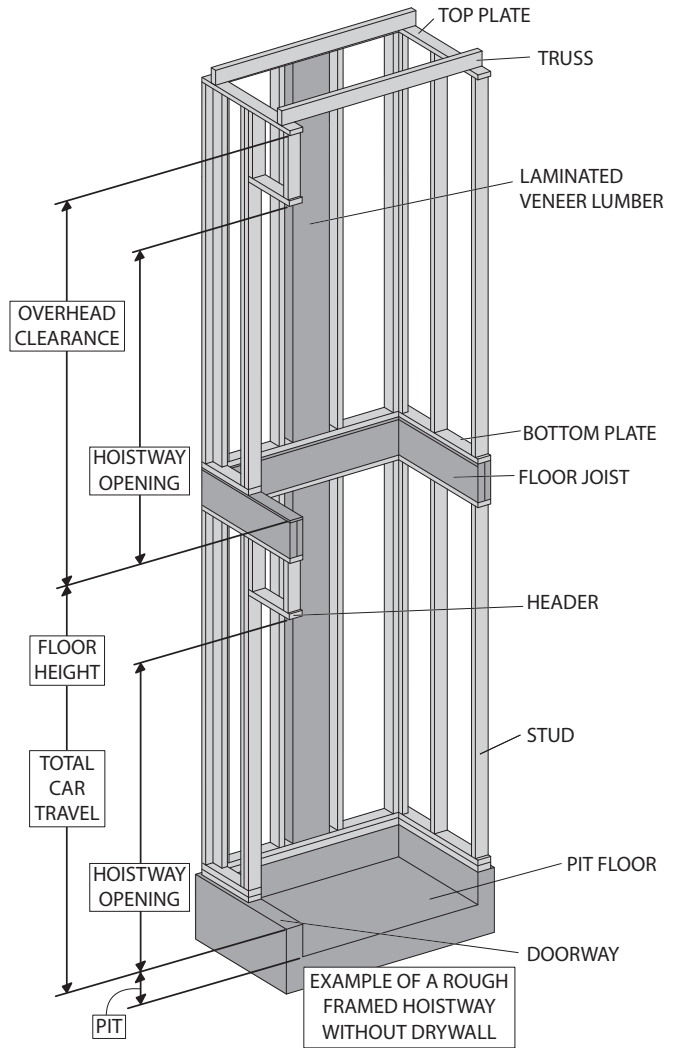
- Notes:**
- Machine space must be climate controlled environment
 - Ensure that you have enough space to access and work in the attic.

Hoistway Illustrations - Series F028

Typical layouts shown here may vary from your actual hoistway.

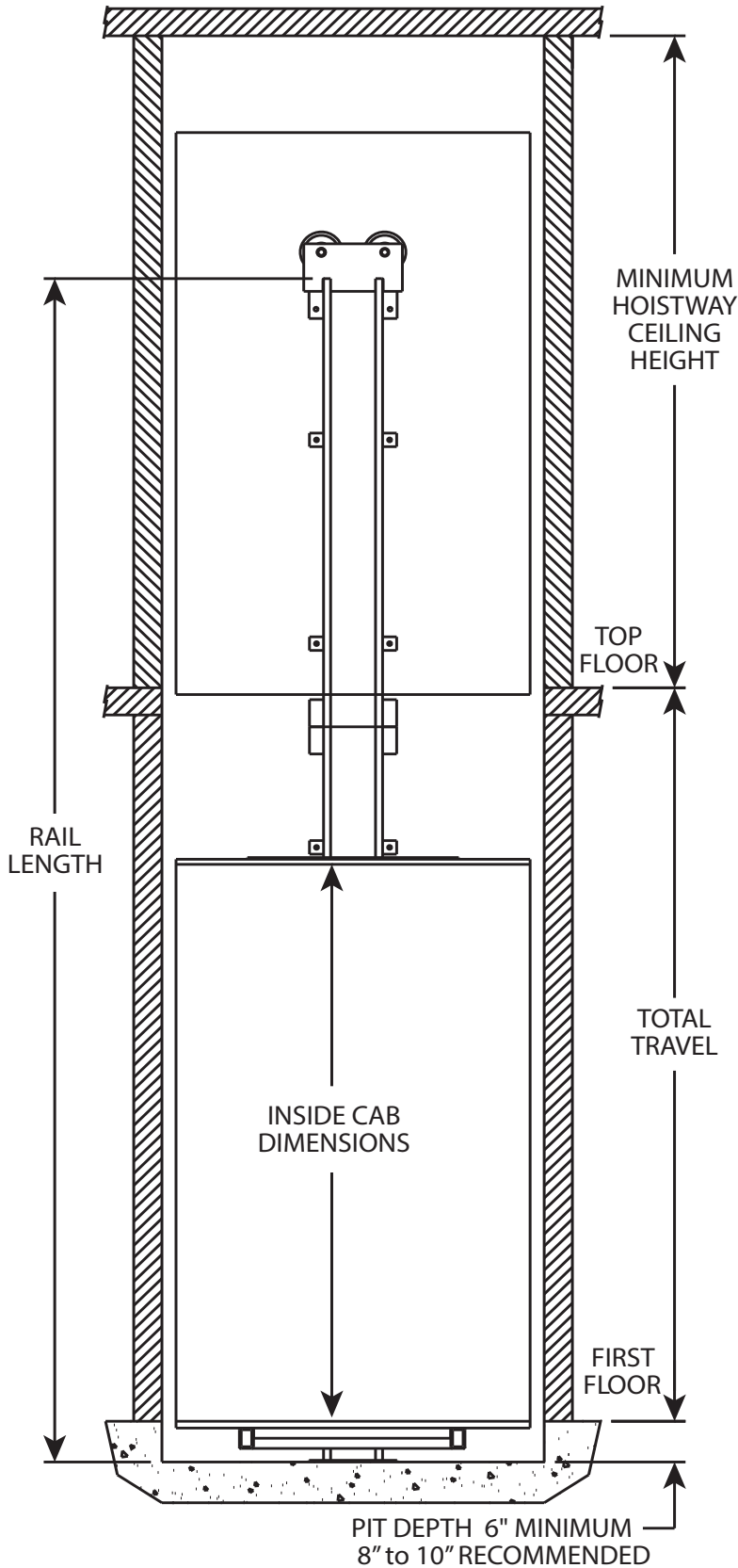
The purpose of these layouts is for a general understanding.

Please refer to the Fox Valley Elevator drawings and specifications that will be provided by your local authorized dealer.



These drawings depict sample construction only. It is the responsibility of the installer, contractor or engineer to design and specify structural supports. All construction to be in compliance with local codes.

Hoistway Elevation View with C-Rail- Series F028



Required Overhead Heights

Inside Car Dimension	7'0"
Minimum Hoistway Overhead Height	8'0"

This is a graphical representation of Fox Valley Elevator Builders Series which offers up to 3 stops and up to a travel distance of 32 feet.

Rail Calculations

$$\text{Rail Length} = \text{Pit Depth} + \text{Travel} + 66''$$

Elevator Fixtures & Finishes- Series F028

Car Size: 48" x 36" (12 ft²)

Car Height: 84"

Elevator Car Style: Unfinished birch paint grade - Designer Style

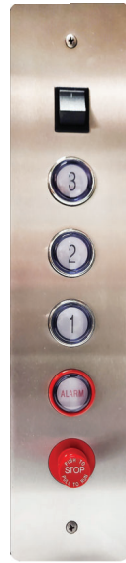
- ▶ Single opening – Any configuration
- ▶ Unfinished flat wood birch handrail
- ▶ Finished flooring is 1/4" thick (50lbs) max *(Not included)*

Note: The contractor and/or builder will be responsible for the flooring in the elevator car.

Birch Paint Grade Elevator Car with Single LED Downlight



Flat Stainless Steel Car Operating Panel



Flat Stainless Steel Hallstation



Phone Plate



Unfinished Flat Wood Birch Handrail



Vinyl Accordion Gates (Option of one)



Maple

Chalk

White

Oak

FOX VALLEY ELEVATOR™ Builders Series Order Form

Job Name _____ Job Address (Required) _____ City _____ State _____ Zip Code _____
 Dealer Name _____ Dealer Number _____ Dealer Phone _____
 Ship to Address _____ City _____ State _____ Zip Code _____ Dealer Contact _____
 FOR SHIPPING Residential Job Site Business Freight Terminal

Machine Room

Behind Rail - Floor Location _____ Overhead Attic-Behind Rail



Stops

2 3

Vinyl Accordion Gate (Select one)

Maple Chalk White Oak

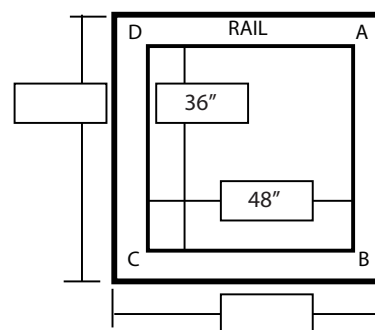
Door Strike (LOOKING INTO THE HOISTWAY):

Landing	Hoistway	
	RH	LH
3		
2		
1		

Hoistway Dimensions:

Total Travel (32' Max Travel)	
Overhead (8" Min)	
Pit (6"- 10" Suggested)	

OUTSIDE BOX: HOISTWAY
 INSIDE BOX: ID OF CAR



GIVE HOISTWAY DIMENSIONS IF THE
 HOISTWAY IS LARGER THAN DEPICTED
 ON THE NEXT PAGE(S).

Recessed Kit

No Yes Qty: _____

Additional Travel Cable?

Maximum distance from the hoistway to the controlled space is 50' feet

Yes How much? _____ ft *Standard travel +20 single opening*

Other Upgrades?

Kellum Grip Buck Boost Transformer Mini Router

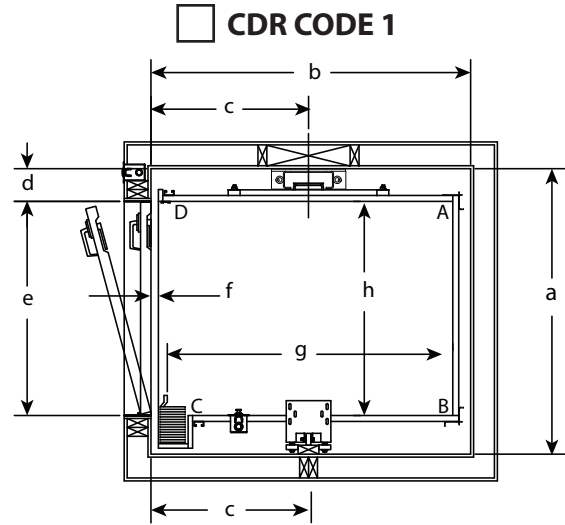
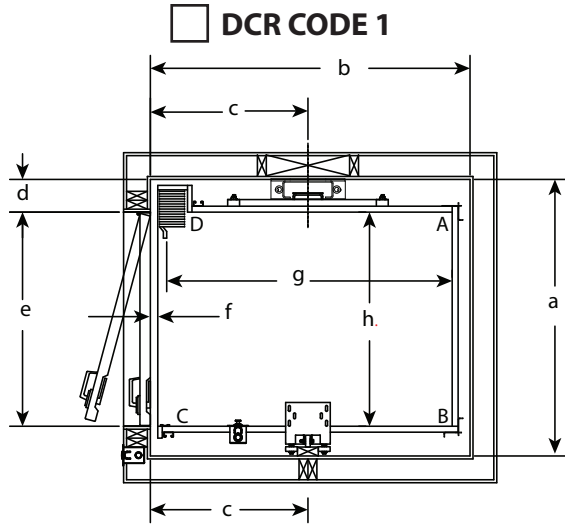
Installation Tools?

50' Service Pendant

*Other installation tools available through
 Fox Valley Elevator's Tech Support*

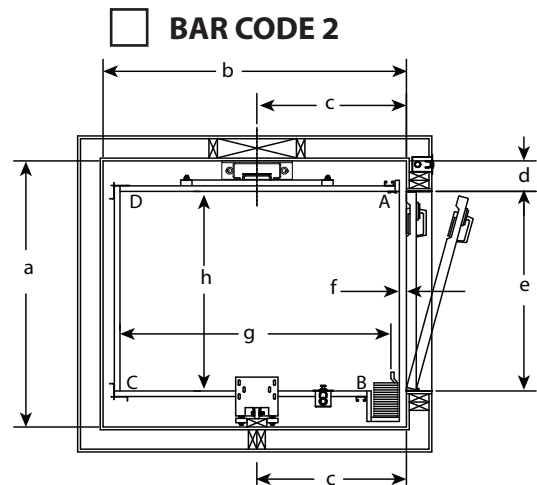
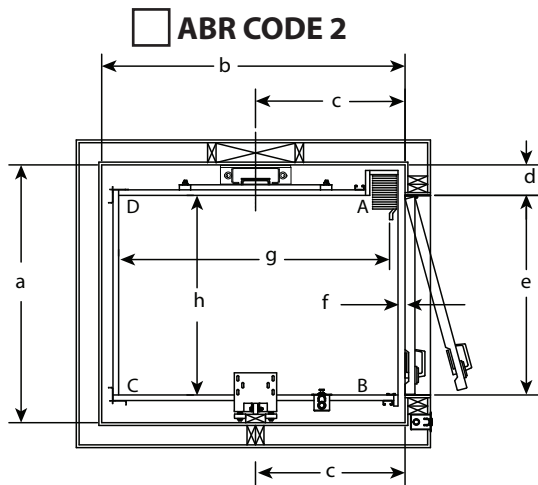
Builders Series Order Form Elevators are illustrated with accordion gates.

Selected the Builder Series Elevator Hoistway Layout by checking only one box.



Hoistway Layout	Sq Ft	Car Size	a	b	c	d	e	f	g	h
DCR Code 1	12 sq ft	48" X 36"	46.5"	53.75"	26.5"	5.5"	36"	0.75"	48"	36"
CDR Code 1	12 sq ft	48" X 36"	48"	53.75"	26.5"	5.5"	36"	0.75"	48"	36"

*All dimensions are finished hoistway dimensions

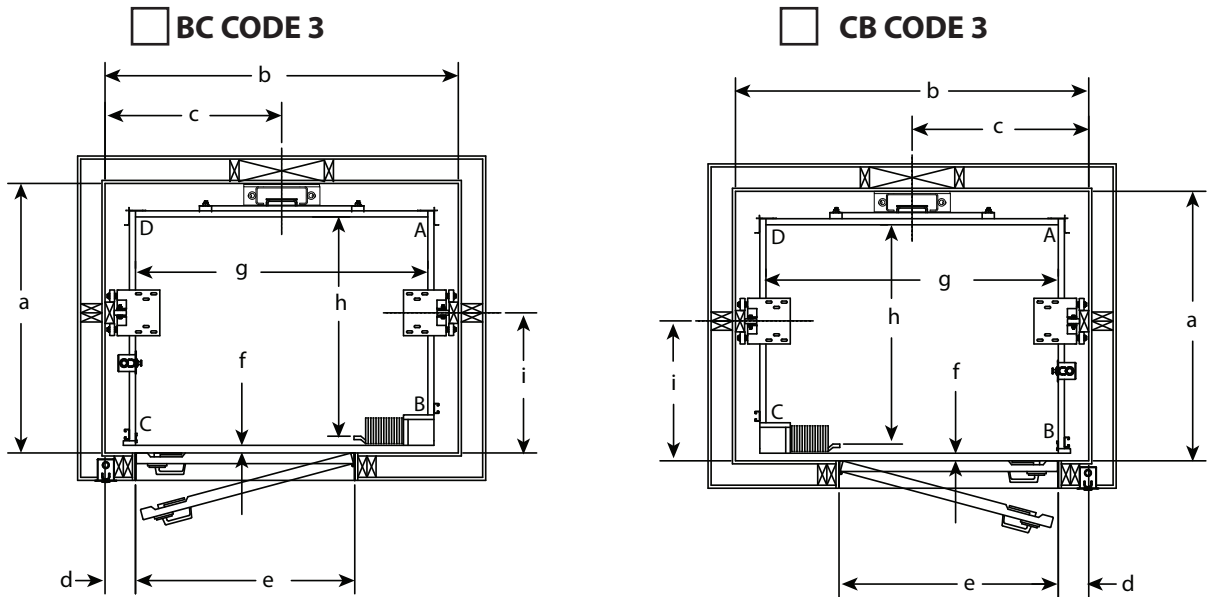


Hoistway Layout	Sq Ft	Car Size	a	b	c	d	e	f	g	h
ABR Code 2	12 sq ft	48" X 36"	46.5"	53.75"	26.5"	5.5"	36"	0.75"	48"	36"
BAR Code 2	12 sq ft	48" X 36"	48"	53.75"	26.5"	5.5"	36"	0.75"	48"	36"

*All dimensions are finished hoistway dimensions

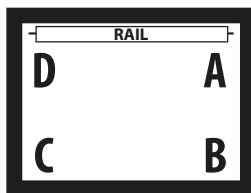
Builders Series Order Form Elevators are illustrated with accordion gates.

Selected the Builder Series Elevator Hoistway Layout by checking only one box.



Hoistway Layout	Sq Ft	Car Size	a	b	c	d	e	f	g	h	i
BC Code 3	12 sq ft	48" X 36"	44.25"	58"	29"	5"	36"	0.75"	48"	36"	23"
CB Code 3	12 sq ft	48" X 36"	44.25"	58"	29"	5"	36"	0.75"	48"	36"	23"

*All dimensions are finished hoistway dimensions



1. The DA is the side on which the rail is attached.
2. The first letter refers to the attachment location of the gate.
3. The second letter refers to the location of the strike plate.
4. If present, the third letter "R" denotes a recessed gate.

Construction Notes:

- Use specified rail backing from architect to frame into wall. Fox Valley Elevator recommends LVL's.
- The hoistway illustrations below show finished dimensions. Finished hoistway dimensions include drywall, plaster, and paint.
A maximum of 3/4" (see "f" below) are allowed between the closed hoistway door and the outer edge of the landing sill.
- Determine height of hall station by local code.
- Rough frame door in place with extra space as needed for door interlock system; reference national and local codes.

FOX VALLEY ELEVATOR™

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Fox Valley Elevator, LLC is a proud member of The American Society of Mechanical Engineers, The National Association of Elevator Contractors, The Canadian Elevator Contractors Association and The Accessibility Equipment Manufacturers Association. These organizations are symbols assure you of our commitment to high quality and accessibility to everyone.



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MADE IN THE USA



with US and Global Parts