



WAUPACA
ELEVATOR COMPANY, INC.
Specify the Specialists®

Planning Guide

Residential Elevators

Series 022

T-Rail Winding Drum
RMR- Reduced Machine Room



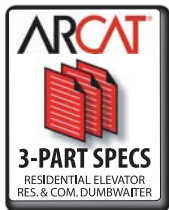


We are a proud member of the Accessibility Equipment Manufacturers Association. This symbol assures you of our commitment to high quality and accessibility to everyone.



Waupaca Elevator Mission Statement

Our company's mission is to supply and service products that meet or exceed our customers' expectations of high quality, value, delivery and longevity. Our success is a direct reflection of our employees' involvement and commitment to excellence. We strive to continuously improve our products to ensure meeting the future requirements of our customers and facilitate competitive growth.



CSI 3-Part Specifications

Customize and download CSI 3-Part Specifications by logging on to:

www.arcat.com - specify Waupaca Elevator as the requested manufacturer

www.waupacaelevator.com - go to "Architect Section" click on linking icon



SpecWizard is a faster easier way to customize CSI 3-part residential elevator specifications. Follow the above website information and choose the Spec Wizard icon. The drop down menus could not be any easier to use, just click on your choice of listed options and within a couple of minutes you have a completely customized spec.

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Introduction

This Planning Reference Guide is to be used as a guide to determine parameters of installation and steps taken to achieve a proper elevator installation. This guide may be used by the architect, contractor, dealer or home owner. The information in this guide is intended as an overview, each installation will have job specific specifications that must be followed. Do not attempt to construct a hoistway on this information alone.

Elevator installation is to be done 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 Electric Code, American Society of Mechanical Engineers safety code, and state and local building codes. Waupaca Elevator's products are designed to meet the requirements of ASME - 17.1 National Elevator Codes for residential elevators and are fully certified by a registered professional engineer. Waupaca Elevator Company, Inc. elevators manufactured and installed under the proper parameters are under warranty for 2 years. Manufacturer assumes no liability for equipment not installed in compliance with these codes.

Planning Steps

1. - Locate local dealer and together determine the following:
 - A - Select drive system, car type and design specifications
 - B - Address national, state and local code requirements
 - C - Hoistway size
 - D - Car size, layout and options
 - E - Machine room location and layout
 - F - Electrical requirements
2. - Obtain and follow site specific field drawings while building hoistway, doorways and any other construction related to the elevator.
3. - Coordinate with dealer to install elevator.



Winding Drum Elevator

Series 022 - T-Rail
RMR Reduced Machine Room

Advantages

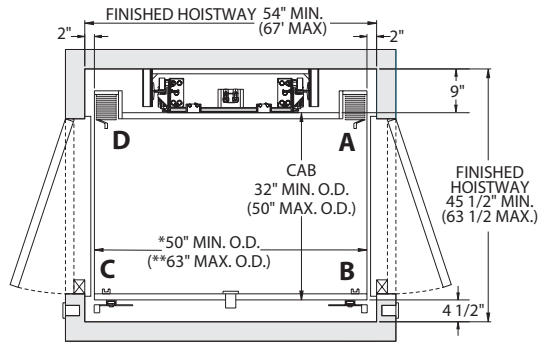
- Reliable
- Reduced Machine Room
- Smooth Ride
- Quiet Operation



Hoistway Layout -

Minimum and Maximum Dimensions

Series 022 T-Rail RMR Reduced Machine Room



Minimum

* Single Opening - 43 - 1/4" O.D. Min.
(rail is not centered in hoistway)

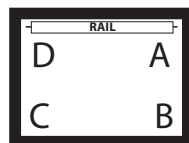
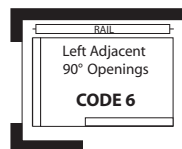
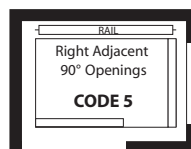
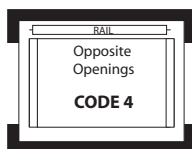
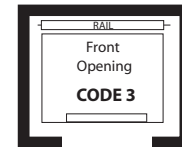
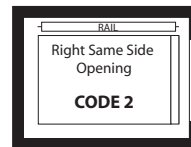
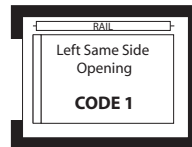
Maximum

** Single Opening - 62 - 1/2" O.D. Max.

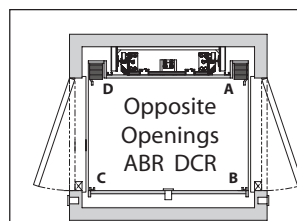
NOTE:

- 1) Minimum **D A** dimensions reflect rail centered in hoistway
- 2) Minimum **D A** dimension for car without a gate recess is 37" O.D. (outside dimension)
- 3) Car I.D. (inside dimensions) can not exceed 15 sq.ft. for a 1,000 lb. rated cars.

Car Opening Configurations and Coding



- 1- The D A 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.



Example: ABR DCR

First Gate - ABR
A- gate attachment
B - strike plate
R - recessed gate

Second Gate - DCR
D - gate attachment
C - strike plate
R - recessed gate



Hoistway Layout - Series 022

Construction Notes:

- Use specified rail backing from architect to frame into wall.
- The hoistway illustrations below show finished dimensions. Finished hoistway dimensions include drywall, plaster and paint.
- A maximum of 3" (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 an extra inch of space on each side of the door to allow for door installation.

The following examples are of 1,000 lb. units. Elevators are illustrated with accordion gates. The following layouts were designed for travel up to 50 feet.

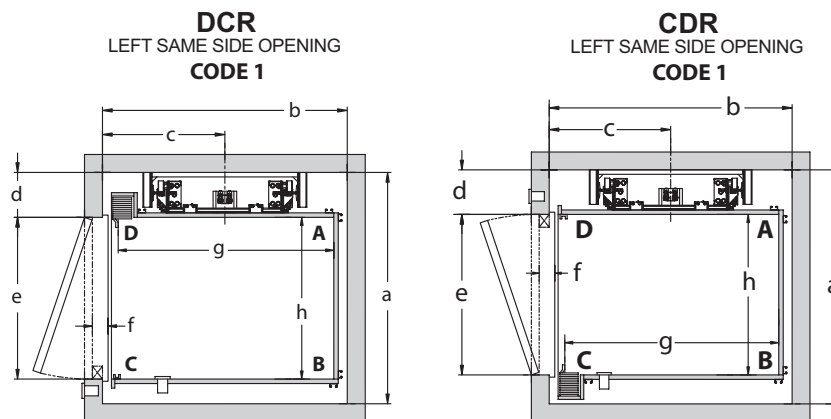
These symbols are listed beside the car size Waupaca Elevator believes to be best suited for use by wheelchair passengers and their accompanying attendant.



Recommended size for wheelchair passenger

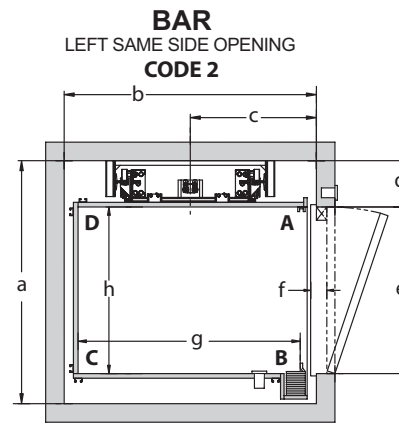
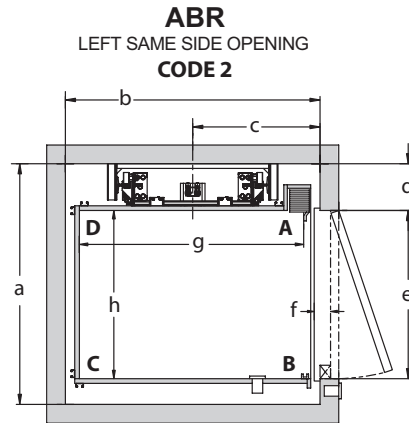


Recommended size for both wheelchair and attendant passengers

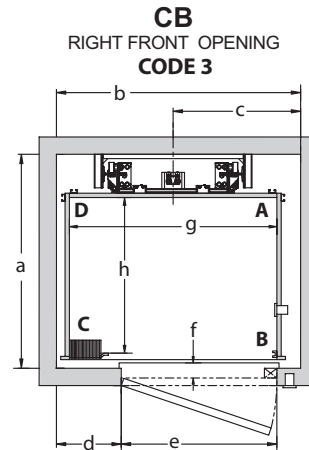
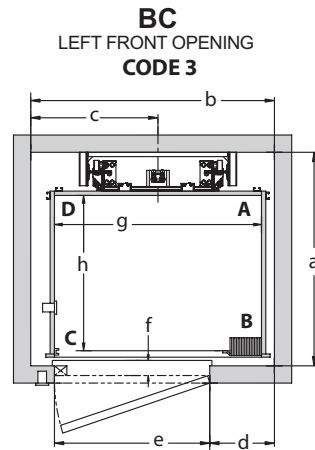


ELEVATOR HOISTWAY LAYOUT		EXCELEVATOR-RMR ELEVATOR HOISTWAY DIMENSIONS								
		CAR SIZE	FINISHED HOISTWAY DIMENSIONS							
			a	b	c	d	e	f	g	h
CODE 1 LEFT SAME SIDE OPENING	DCR	48" x 36"	51.5"	54.5"	27.25"	10"	36"	3"	48"	36"
	DCR	54" x 40"	55.5"	60.5"	30.25"	14"	36"	3"	54"	40"
	DCR	60" x 36"	51.5"	66.5"	33.25"	10"	36"	3"	60"	36"
CODE 1 LEFT SAME SIDE OPENING	CDR	48" x 36"	52.5"	54.5"	27.25"	10"	36"	3"	48"	36"
	CDR	54" x 40"	55"	60.5"	30.25"	10"	36"	3"	54"	40"
	CDR	60" x 36"	66.5"	52.5"	33.25"	10"	36"	3"	60"	36"

Hoistway Layout - Series 022



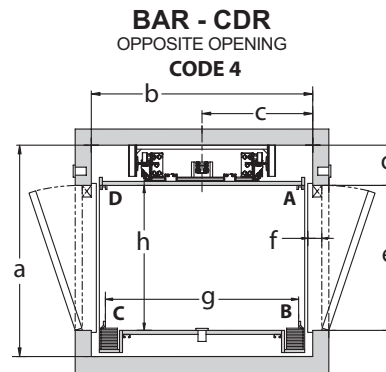
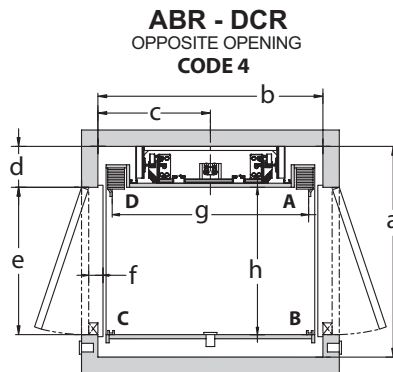
ELEVATOR HOISTWAY LAYOUT		EXCELEVATOR-RMR ELEVATOR HOISTWAY DIMENSIONS								
		CAR SIZE	FINISHED HOISTWAY DIMENSIONS							
			a	b	c	d	e	f	g	h
CODE 2 RIGHT SAME SIDE OPENING	ABR	48" x 36"	51.5"	54.5"	27.25"	10"	36"	3"	48"	36"
	ABR	54" x 40"	55.5"	60.5"	30.25"	14"	36"	3"	54"	40"
	ABR	60" x 36"	51.5"	66.5"	33.25"	10"	36"	3"	60"	36"
CODE 2 RIGHT SAME SIDE OPENING	BAR	48" x 36"	52.5"	54.5"	27.25"	10"	36"	3"	48"	36"
	BAR	54" x 40"	55"	60.5"	30.25"	10"	36"	3"	54"	40"
	BAR	60" x 36"	52.5"	66.5"	33.25"	10"	36"	3"	60"	36"



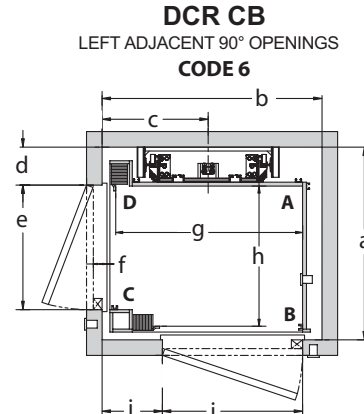
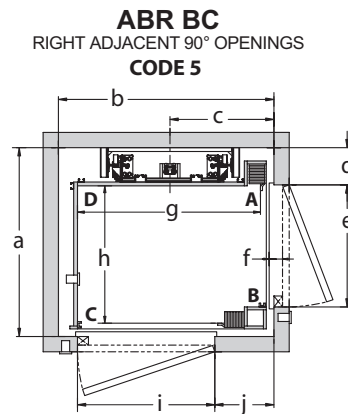
ELEVATOR HOISTWAY LAYOUT		EXCELEVATOR-RMR ELEVATOR HOISTWAY DIMENSIONS								
		CAR SIZE	FINISHED HOISTWAY DIMENSIONS							
			a	b	c	d	e	f	g	h
CODE 3 LEFT FRONT OPENING	BC	48" x 36"	49.5"	56.5"	29.5"	15"	36"	3"	48"	36"
	BC	54" x 40"	53.5"	62.5"	32.5"	21"	36"	3"	54"	40"
	BC	60" x 36"	49.5"	68.5"	35.5"	27"	36"	3"	60"	36"
CODE 3 RIGHT FRONT OPENING	CB	48" x 36"	49.5"	56.5"	29.5"	15"	36"	3"	48"	36"
	CB	54" x 40"	53.5"	62.5"	32.5"	21"	36"	3"	54"	40"
	CB	60" x 36"	49.5"	68.5"	35.5"	27"	36"	3"	60"	36"



Hoistway Layout - Series 022



ELEVATOR HOISTWAY LAYOUT		EXCELEVATOR-RMR ELEVATOR HOISTWAY DIMENSIONS								
		CAR SIZE	FINISHED HOISTWAY DIMENSIONS							
			a	b	c	d	e	f	g	h
CODE 4 OPPOSITE OPENING	ABR-DCR	48" x 36"	51.5"	55"	27.5"	10"	36"	3"	48"	36"
	ABR-DCR	54" x 40"	55.5"	61"	30.5"	14"	36"	3"	54"	40"
	ABR-DCR	60" x 36"	51.5"	67"	33.5"	10"	36"	3"	60"	36"
CODE 4 OPPOSITE OPENING	BAR-CDR	48" x 36"	52.5"	55"	27.5"	10"	36"	3"	48"	36"
	BAR-CDR	54" x 40"	55"	61"	30.5"	10"	36"	3"	54"	40"
	BAR-CDR	60" x 36"	52.5"	67"	33.5"	10"	36"	3"	60"	36"

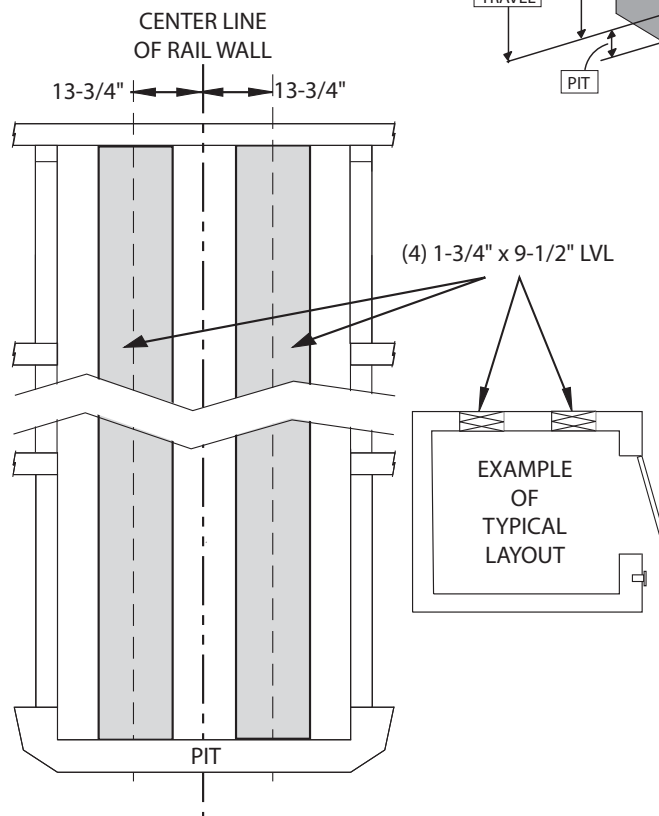
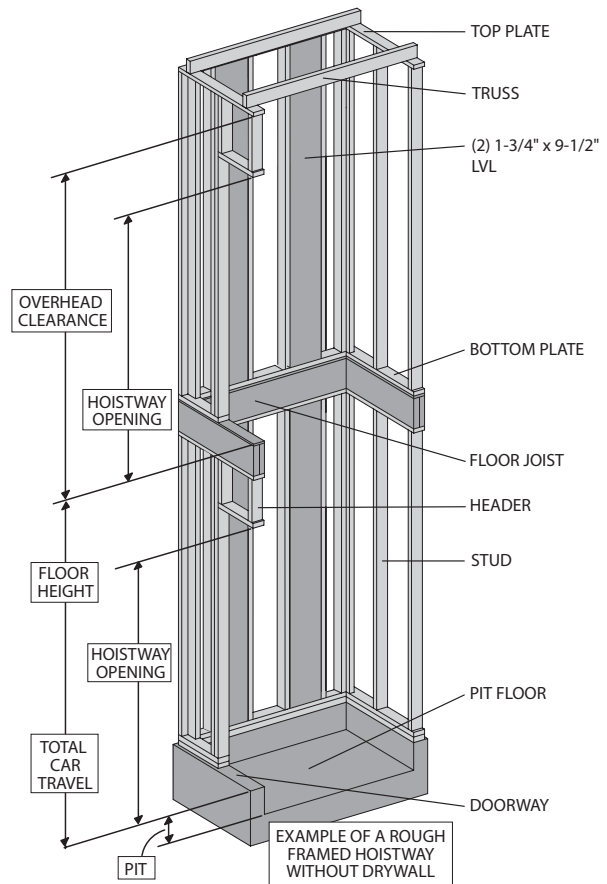


ELEVATOR HOISTWAY LAYOUT		EXCELEVATOR-RMR ELEVATOR HOISTWAY DIMENSIONS										
		CAR SIZE	FINISHED HOISTWAY DIMENSIONS									
			a	b	c	d	e	f	g	h	i	j
CODE 5 RIGHT ADJACENT 90° OPENING	ABR-BC	48" x 36"	49.5"	56.5"	27.25"	9.75"	32"	3"	48"	36"	36"	15.5"
	ABR-BC	 54" x 40"	53.5"	62.5"	30.25"	9.75"	36"	3"	54"	40"	36"	21.5"
	ABR-BC	 60" x 36"	49.5"	68.5"	33.25"	9.75"	32"	3"	60"	36"	36"	27.5"
CODE 6 LEFT ADJACENT 90° OPENING	DCR-CB	48" x 36"	49.5"	56.5"	27.25"	9.75"	32"	3"	48"	36"	36"	15.5"
	DCR-CB	 54" x 40"	53.5"	62.5"	30.25"	9.75"	36"	3"	54"	40"	36"	21.5"
	DCR-CB	 60" x 36"	49.5"	68.5"	33.25"	9.75"	32"	3"	60"	36"	36"	27.5"



Hoistway Illustrations - Series 022

Typical layouts shown here may vary from your actual hoistway. The purpose of these layouts are for a general understanding. Please refer to the Waupaca Elevator drawings and specifications that will be provided by your local 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 Specifications - Series 022

Refer to Illustration on previous page

ATTENTION CONSTRUCTION CONTRACTOR:

This is an example of a hoistway. Job specific documentation will be provided by Waupaca Elevator from which to construct the hoistway.

Hoistway Construction Requirements

(to be completed prior to elevator installation by contractor)

1. **Electrical Requirements:**
 - Dedicated 208/230 Volts, 25 AMP Single Phase, 60 Hertz.
 - A fused disconnect switch with branch 3 pole circuit wire to suit a 25 AMP service, fused for 25 AMP dual element (time delay fuse) with neutral.
 - 115 Volt, 15 AMP single phase circuit for car lighting.
 - Electrical wiring to comply with applicable codes.
2. **Unfinished/Un-installed Door** - Installation company may prefer a minimum of one hoistway door and associated framing be left unfinished/un-installed to accommodate elevator installation equipment and to prevent accidental damage to door and framing (preferably at grade level).
3. **Plumb and Square Hoistway** - Hoistway must be plumb within 1/8 inch per 10 ft. 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. (see page 14)
5. **Machine Room** - Machine room must be provided for operating equipment that meets national electric code clear space requirements and all local codes. Machine room must have a light switch and a convenience outlet. Temperature in machine room to be maintained between 60-110 ° F and relative humidity should not exceed 95%.
6. **Telephone Connection** - Code requires a telephone connection to the elevator car therefore, a phone line must be installed in the machine room.
7. **ASME 17.1 Sec 5.3** - Hoistway to be constructed in accordance with ASME 17.1 Sec 5.3 and all local codes.
8. **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. Waupaca Elevator recommends the use of solid core doors.
9. **No Alterations** - Any alterations to the equipment without written authorization by Waupaca Elevator will void all warranties.
10. **Pit Floor Strength** - Load on pit floor is 4,750 lbs. (minimum pit depth of 8").



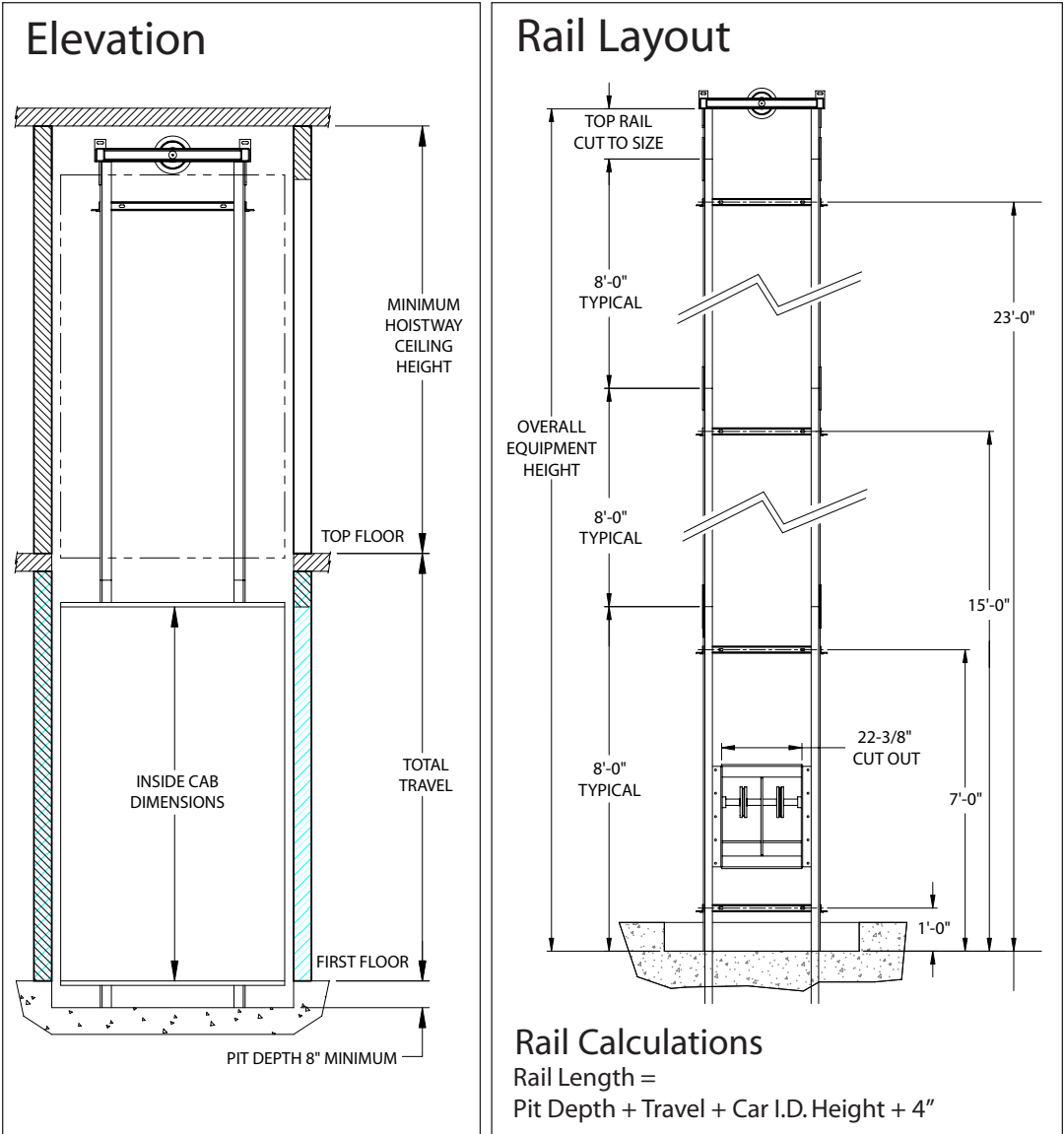
Hoistway Ceiling Heights, Elevation and Rail Layout - Series 022

Minimum Hoistway Ceiling Heights*

Inside Cab Dimension	6' 10"	7' 0"	7' 4"	8' 0"
Minimum Hoistway Ceiling Height	7' 10"	8' 0"	8' 4"	9' 0"

* Custom sized cabs will alter these dimensions. Waupaca Elevator will provide you with the appropriate dimensions. Please contact your local dealer to acquire alternate layouts.

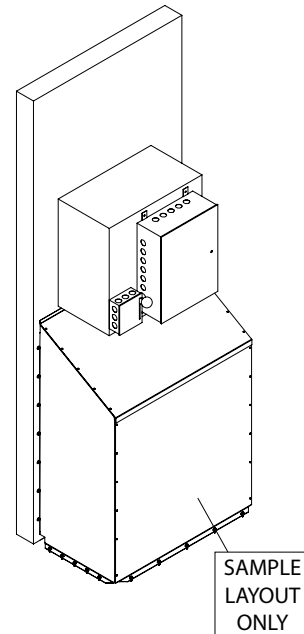
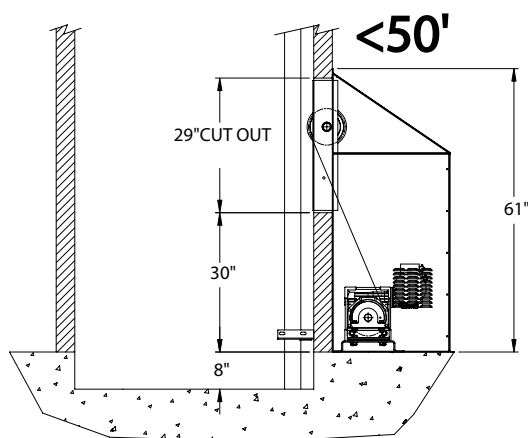
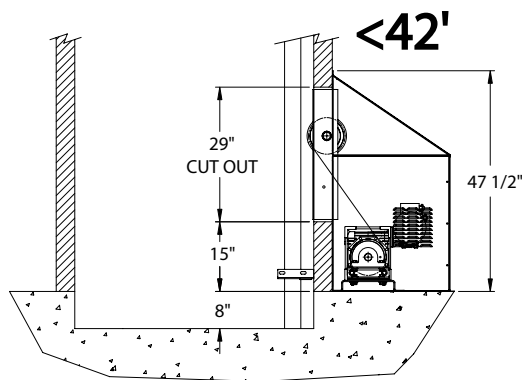
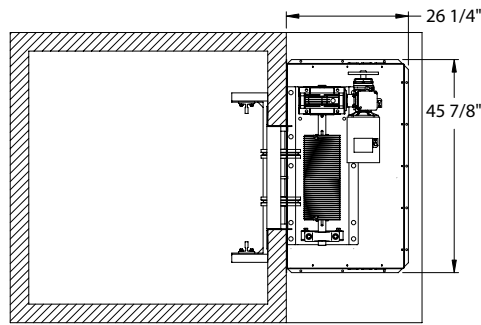
This is a graphical representation of Waupaca Elevator’s Excelelevator Series which offers a total of six stops and a total travel distance of 50 feet.



Machine Room - Series 022

Typical 1ST Floor Machine Room Layout

1. The Controller requires minimum clear space of 36" x 30" located directly in front of the controller (refer to illustration).
2. A lockable service disconnect must be placed within sight of the controller and must be easily accessible from the latch side of the doorway.
3. A machine room or enclosure must be provided that meets national electrical code clear space requirements and all local codes. The machine room must contain a convenience outlet and light with switch. Temperatures in the machine room must be maintained between 60° - 110°F (with a relative humidity not to exceed 95%).

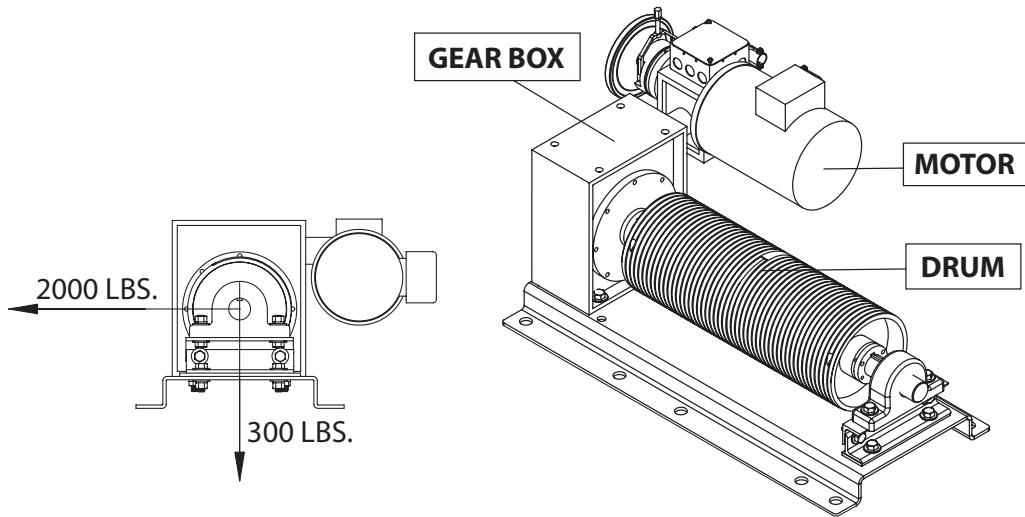


Note: Layouts on this page apply to first floor machine room location only. Layouts may change depending on which floor contains the machine equipment. Contact Waupaca Elevator for more information.

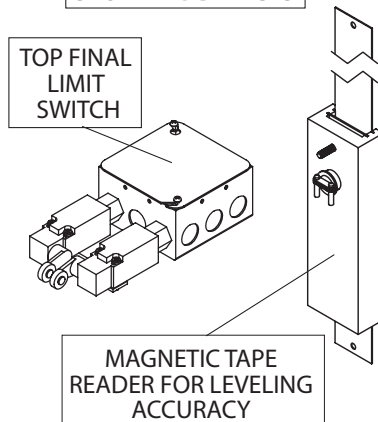
Elevator Equipment - Series 022

Typical

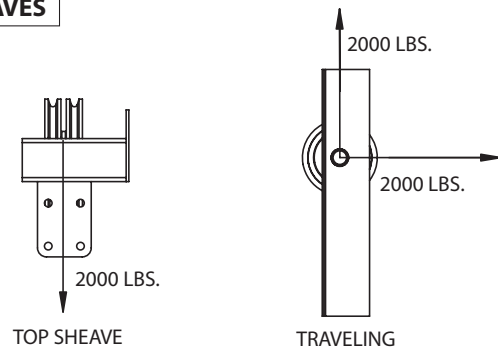
- Powerhead
- Gear Box
- Interlocks
- Sheaves
- Motor
- Stopping Devices
- Rail Segment



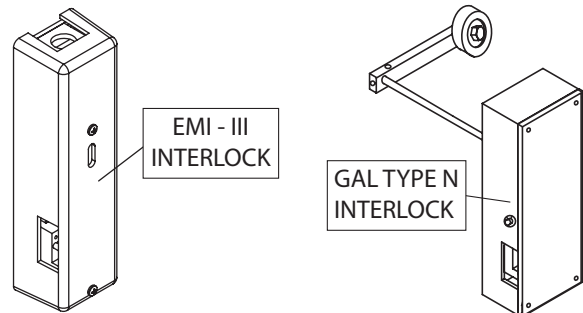
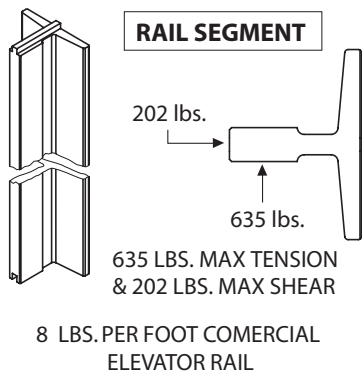
STOPPING DEVICES



SHEAVES



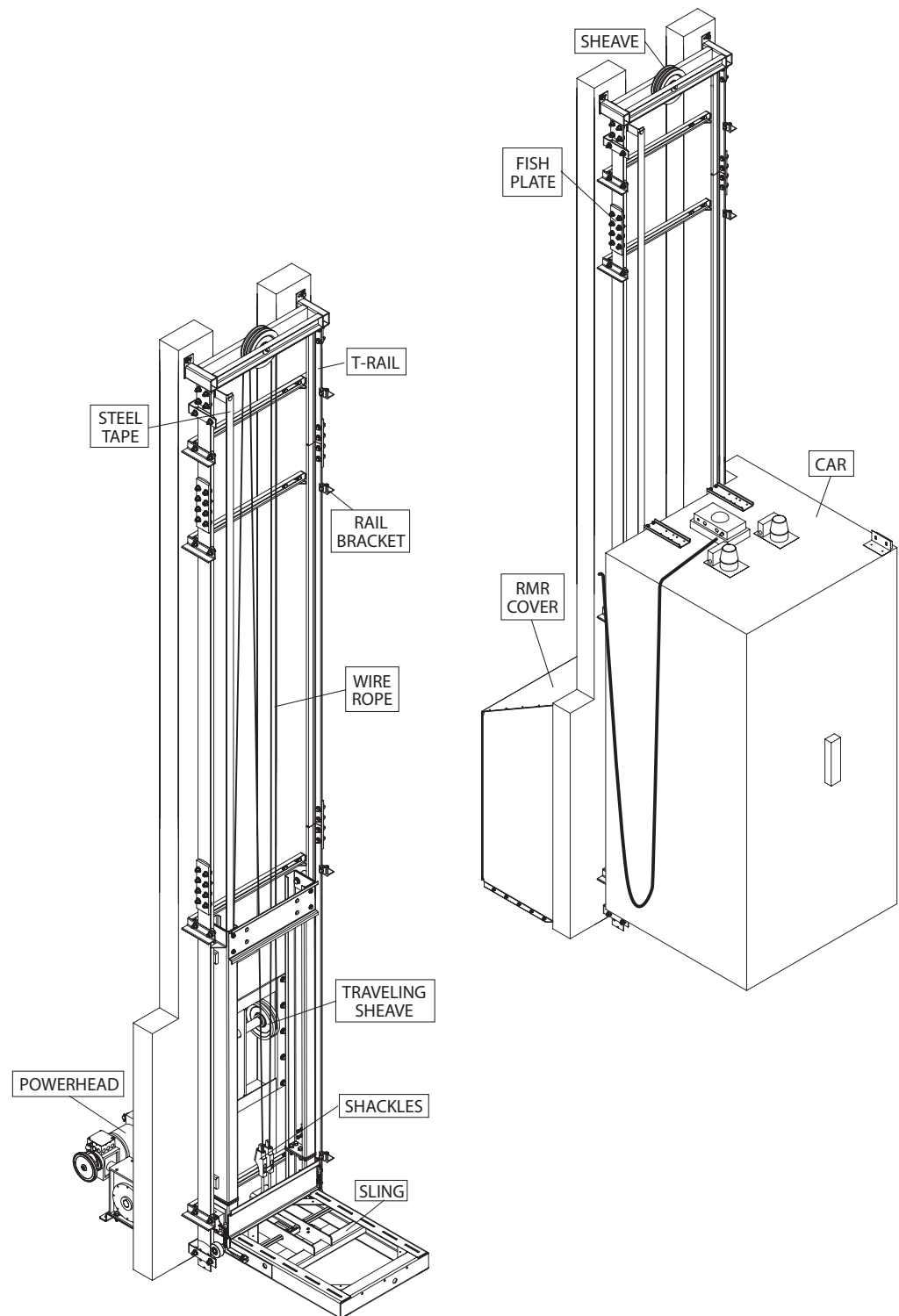
RAIL SEGMENT



HOISTWAY DOOR INTERLOCKS EMI or GAL Type "N" REQUIRED AT EACH OPENING TO PREVENT HOISTWAY OR ELEVATOR ACCESS AT ANY DOOR OTHER THAN WHERE CAR IS LOCATED.



Elevator - Series 022





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