

# Planning Guide

# Residential and Commercial Dumbwaiters

**Series 007 - Cable-Waiter (Residential)** 

**Series 011 - Paca-Waiter (Residential)** 

**Series 311 - Paca-Waiter (Commercial)** 

**Series 511 - Paca-Waiter (Commercial)** 

# Waupaca Elevator's Mission Statement

Our mission is to deliver and support an enhanced quality of life for people with a need or want for vertical transportation. We are dedicated to our relationships, products, and industry through teamwork and education.

Waupaca Elevator Company, Inc, Elevator is a proud member of The American Society of Mechanical Engineers, The National Association Elevators Contractors, The Canadian Elevator Contractor Association, The Accessibility Equipment Manufacturers Association. These symbols assures you of our commitment to high quality and accessibility to everyone.









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# Introduction

This Planning Guide is to be used as a reference to determine parameters of installation and steps taken to achieve a proper dumbwaiter 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.

Dumbwaiter 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 - A17.1 National Elevator Codes for dumbwaiters. Manufacturer assumes no liability for equipment not installed in compliance with these codes.

Waupaca Elevator Company, Inc., reserves the right to modify the design, technical specifications and dimensions of the products shown in this document.

# **Planning Steps**

Locate local dealer and custom design your dumbwaiter together. Please follow the steps below to finish creating your dumbwaiter package:

- Determine the location and how dumbwaiter will be used. Select car type, gate type, capacity of the dumbwaiter and choose from the available option that are refered in the Waupaca Elevator Brochure.
- Layout machine room and location.
- 3. Plan for all 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 structural engineers. Use job specific drawings while building hoistway, doorways, machine room, and any other construction related to the dumbwaiter.
- 6. Coordinate with your dealer to install your custom dumbwaiter.



# **Dumbwaiter Reference Chart**

Residential Units				
Mechanical Features Cable-Waiter Paca- W				
<b>Weight Capacity</b>	<b>'eight Capacity</b> Up To 100 lbs. 200		200 lbs.	
Travel	Up To	50′	34'	
Stops	Up To	6 Stops		
Nominal Speed	Feet Per Minute	30 FPM	50 FPM	
Overhead	Recommended space above top of car. Additional overhead required for some car gates or overhead machine configuration's	1'-6"	2′-0″	
	Phase	Single		
Electrical Requirements	Voltage	110 V	230V	
Requirements	Amperage	15 A	10 A	
Drive System		Winding Drum		
Motor	Horsepower	Horsepower 3/4 HP 1.5 HI		
Controller Size	Height x Width x Depth	18" x 18" x 6"		
Sheave	Diameter	4"	6-3/8"	
Drum	Diameter	5-1/4"	5-3/4"	
Cable Type	1/8" x 7 x 19 GAC 3/16" x 7 x 19		3/16" x 7 x 19 GAC	
Rail Type	Steel	1-1/2" x 1-1/2" x 1/8" Angle	2" x 1" x 3/16" C Channel	
Machine Placement		Above or Below		



# **Dumbwaiter Reference Chart**

	Commercial Units			
Med	chanical Features	Cable Waiter	Paca-Waiter	
Weight Capacity	Up To	300 lbs. 500 lbs.		
Travel	Up To	50′		
Stops	Up To	6 S	6 Stops	
Nominal Speed	Feet Per Minute	60	FPM	
Overhead	Recommended space above top of car. Additional overhead required for some car gates or overhead machine configurations	2'-3"		
Electrical	Phase	Single		
Requirements	Voltage	230 V		
(Buck Boost Required on Paca-Waiter Units)	Amperage	25 A		
Drive System		Winding Drum		
Motor	Horsepower	2 HP 3 HP		
Controller Size	Height x Width x Depth	24" x 24" x 8"		
Sheave	Diameter	7-3/4"		
Drum	Diameter	7-3/4"		
Cable Type		1/4" x 7 x 19 GAC		
Rail Type	Steel	2" x 1" x 3/16" C Channel		
Machine Placement		Above or Below		

# **Dumbwaiter Reference Chart**

Car
Material:
Powder Coated Steel
Stainless Steel #4 Finish
Car Options:
Shelves
Light

Gates (required) Bi-parting or Slide-up:		
Stainless Steel #4 Finish		
Tambour (Roll-up):		
PVC (CW 100 & PW 200 residential dumbwaiters only)		

Door Types:	Material:	Optional:
Bi-Parting	Primed Steel	
Slide-Up Doors	Stainless Steel #4 Finish	Frame mounted push buttons, Indicator Light option,
Swing Doors	Powdered Coated	Stainless Sill(s), Counter Loading, Floor Loading, Fusibl Link, Emergency Release, Door Switch

Access Door(s) UL "B" Label Hoistway Door(s)	
Materials:	
Primed Steel	
Stainless Steel. #4 Finish	
Powdered Coated	

	<b>Residential Units</b>		
Custom Wood Doors:	Trims:	Options	
	Stainless Steel #4		
Various Different Styles	Wood	Frame mounted push buttons indicator light options	
	Trim less	indicator light options	

	Interlock(s) (required)
F	G-1 Single Contact Interlock HG-2 Dual Contact Interlock Jsed on Commercial Doors)
	GAL and Cam(s)
	EMI III
	ither GAL, HG-1 or HG-2 Interlock(s) Required On Commercial Units

Additional Options:		
Do	or Open Buzzer (CW 100 & PW 200)	
Gat	te & Door Alarm (CW 100 & PW 200)	
	Car Here	
	In Use	
	Lantern and Chime	
	Position Indicator	



# Car Gate Reference Chart

The dumbwaiter car gate, is attached to the front of the car and travels with it up and down the hoistway. The gate prevents items from leaving or entering the car.

Steel Car with PVC or Metallic Rolltop Gate	6 II . w	
	Cable-Waiter  Available in100 lb. cars  Available Finishes & Material: PVC or Metallic Steel w/ PVC Coating	Paca-Waiter  Available in 200 lb. cars  Available Finishes & Material: PVC or Metallic Steel w/ PVC Coating
Steel Car with Bi-Parting Gate	Cable-Waiter  Available in 100 lb. cars  Available Finishes & Material: Powder Coated Steel or Stainless Steel	Paca-Waiter  Available in 200 lb., 300 lb. & 500 lb. cars  Available Finishes & Material: Powder Coated Steel or Stainless Steel
Steel Car with Slide-Up Gate	<b>Cable-Waiter</b> This Option Is  Not  Available	Paca-Waiter  Available in 300 lb. & 500 lb. cars  Available Finishes & Material: Powder Coated Steel or Stainless Steel

# Commercial Hoistway Door Reference Chart

The door prevents items from accidentally entering the hoistway when the dumbwaiter car is elsewhere. An interlock located at each opening prevents the door from being opened if the dumbwaiter car is not waiting at that landing. We offer the following doors made to your specification. Every opening must have a door.

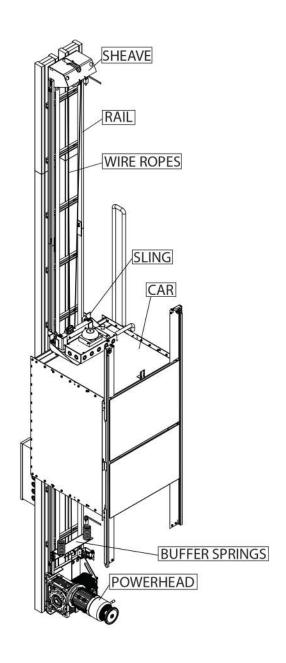
	NSTRUCTION/INSTALLATION NOT lls must not be erected until door	
Maximum Height of 36"		
Swing Door	<b>Bi-Parting Door</b>	Slide-Up Door
Paca-Waiter	Paca-Waiter	Paca-Waiter
300 lbs. & 500 lbs.	300 lbs. & 500 lbs.	300 lbs. & 500 lbs.
Primed Steel or Stainless Steel	Primed Steel or Stainless Steel	Primed Steel or Stainless Steel

# **Residential Mechanical Illustrations**

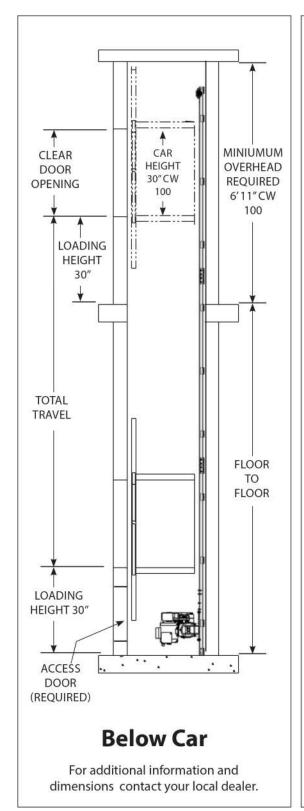
# Cable-Waiter Paca-Waiter SHEAVE SHEAVE RAIL RAIL WIRE ROPES WIRE ROPES SLING SLING CAR CAR POWERHEAD POWERHEAD

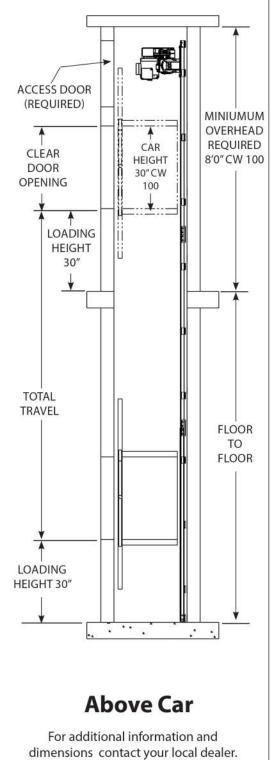
# **Commercial Mechanical Illustrations**

## Paca-Waiter



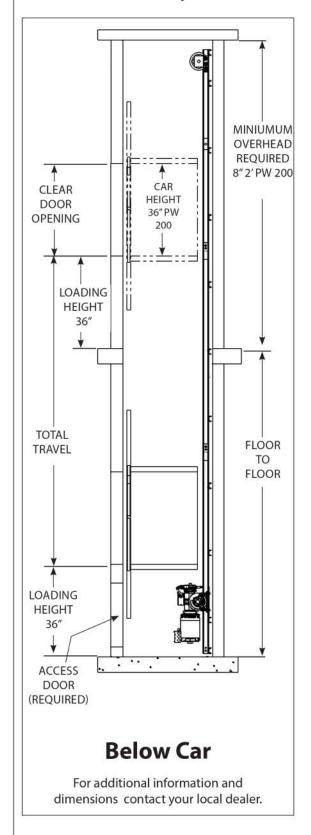
# Elevation Layout - Residential Cable-Waiter

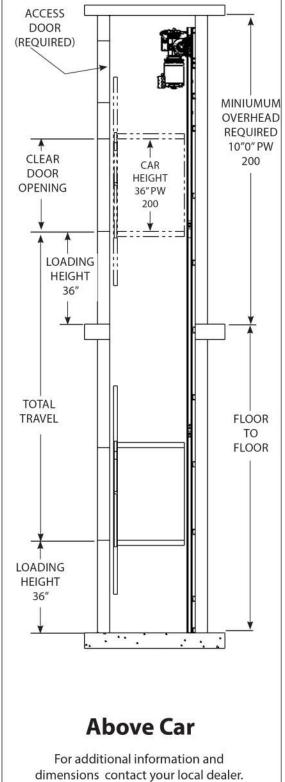




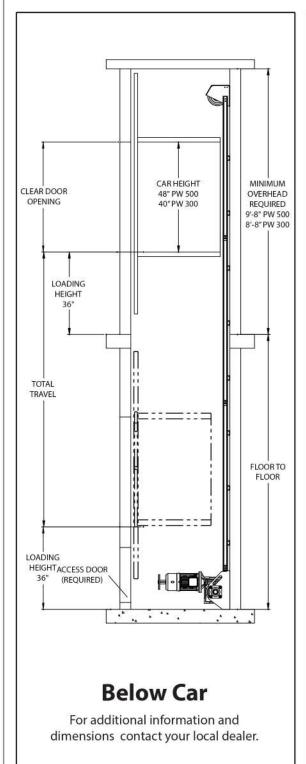


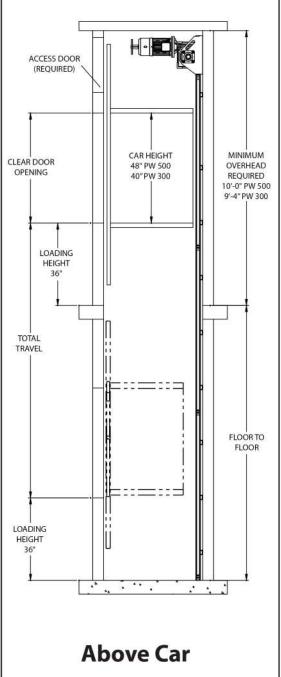
# Elevation Layout - Residential Paca-Waiter





# Elevation Layout - Commercial Paca-Waiter

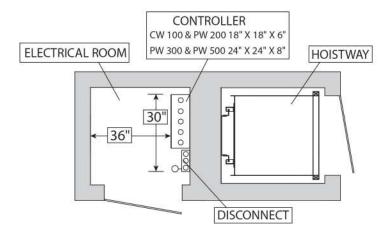




For additional information and dimensions contact your local dealer.

# **Electrical Room Layout**

Typical Electrical Layout (Layouts may change depending on application)



- Electrical room must meet N.E.C. clear space requirements and all local codes.
- The controller requires a clear space of 36" x 30" x 6' 6" directly in front.
- A lockable fusible service disconnect must be placed within sight of the controller and accessible from the latch side of the doorway.
- 4. Temperature in machine room to be maintained between 60-110° F and must not be exposed to the elements.

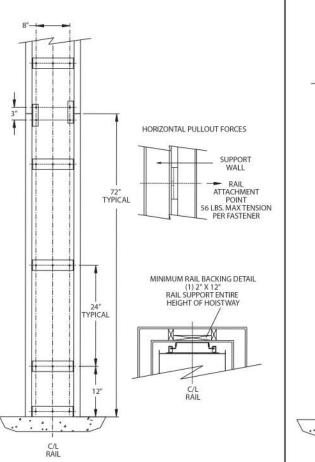
# Hoistway Rail Layout

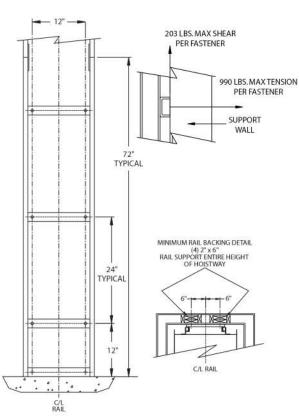
The typical layouts shown here may vary from your actual hoistway. The purpose of these layouts are for a general understanding. Please refer to Waupaca Elevator Company, Inc., drawings and specifications provided by your local dealer.

These drawings depict sample layouts 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.

# Residential Cable-Waiter

### Residential Paca-Waiter





For additional information and dimensions contact your local dealer.

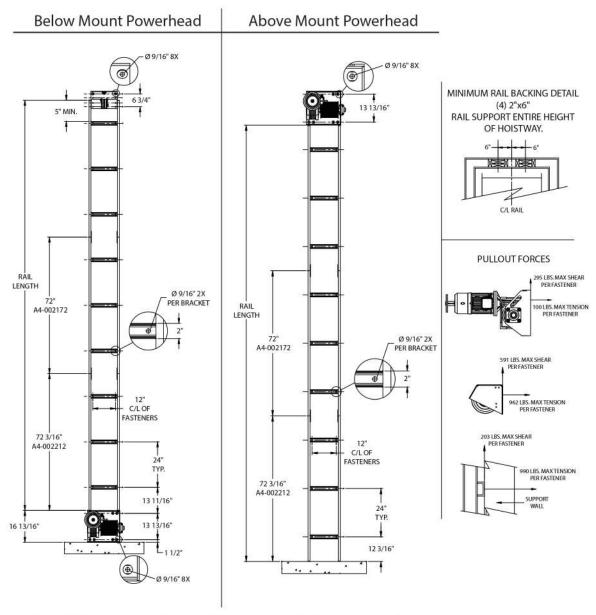


# Hoistway Rail Layout

The typical layouts shown here may vary from your actual hoistway. The purpose of these layouts are for a general understanding. Please refer to Waupaca Elevator Company, Inc., drawings and specifications provided by your local dealer.

These drawings depict sample layouts 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.

## Commercial Paca-Waiter

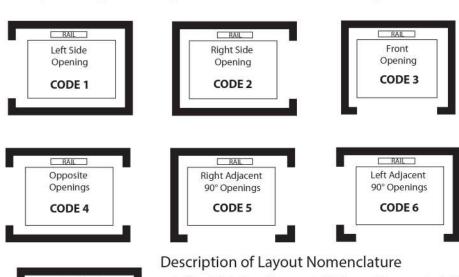


For additional information and dimensions contact your local dealer.



- Note:
  Dumbwaiter to be installed in accordance with ASME A17.1 Part 7.1, 7.2, and all local
  - Electrical room must meet N.E.C. clear space requirements and all local codes.
  - Temperature in machine room to be maintained between 60-110° F and must not be exposed to the elements.
  - All hoistway doors require an interlock, door handle, and latch set.
  - Any alterations to the equipment without written authorization by Waupaca Elevator Company, Inc., will void all warranties.
  - Hoistway must be plum within 1/8 inch per 10 ft of height and square at any point within 1/4 inch based on difference in diagonal measurements.
  - Structure must be capable of supporting the appropriate loads. Local engineering support is recommended.
  - Do not complete door and associated framing to one door (preferably at grade level), until dumbwaiter is completely installed.
  - The following hoistway illustrations are showing finished dimensions. Finished hoistway dimensions include drywall, plaster, and paint.
  - The following information represented for Cable-Waiter (CW) and Paca-Waiter (PW) units are listed as residential R and commercial C units. Note the appropriate application when considering a dumbwaiter. If the application is appropriate a commercial unit may installed in a residence.

#### Car Opening Configurations and Coding



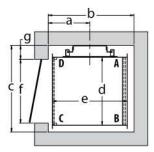


- 1- The DA is the side on which the rail is mounted. The rail is assumed to be mounted on the DA wall as a general point of reference.
- 2-The first letter refers to the hinged side of the door.
- 3- The second letter refers to the strike side of the door.



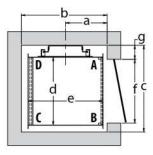
The dumbwaiters listed in the following section are based upon our standard cars. Dumbwaiter cars can be customized to meet your unique needs in accordance with ASME A17.1.

# **Steel Car with Rolltop Gates**



#### LEFT OPENINGS (DC) Code 1

100 100 100	sesse	Re- 8/257		Finished	Hoistw	ay Dir	mensi	ons	
Dumbwaite	r Type	Car Size	a	b	С	d	е	f	g
R Cable-Waite									
R Paca-Waiter	200 lbs.	26"x26"x36"	15.25"	31.25"	33.25"	26"	28"	24.75"	4.875"
R Paca-Waiter	300 lbs.	30"x30"x40"	17.25"	35.25"	37.25"	30"	32"	28.75"	4.875"



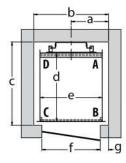
#### RIGHT OPENINGS (AB) Code 2

				Finished	Hoistw	ay Di	mens	ions	
	Dumbwaiter Type	Car Size	а	b	С	d	е	f	g
R	Cable-Waiter 100 lb	os. 20"x20"x30"	12.25"	25.25"	25.5"	20"	22"	18.75"	4.125"
R	Paca-Waiter 200 lb	os. 26"x26"x36"	15.25"	31.25"	33.25"	26"	28"	24.75"	4.875"
R	Paca-Waiter 300 lb	os. 30"x30"x40"	17.25"	35.25"	37.25"	30"	32"	28.75"	4.875"



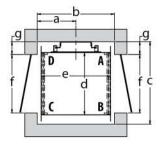
The dumbwaiters listed in the following section are based upon our standard cars. Dumbwaiter cars can be customized to meet your unique needs in accordance with ASME A17.1.

# **Steel Car with Rolltop Gates**



#### FRONT OPENINGS (CB) Code 3

	Control to the control		Finished Hoistway Dimensions										
	Dumbwaiter Type	Car Size	а	b	С	d	е	f	g				
R	Cable-Waiter 100 lbs.	20"x20"x30"	12"	24"	26.75"	22"	20"	18.75"	2.625"				
R	Paca-Waiter 200 lbs.	26"x26"x36"	16"	32"	33.5"	28"	26"	24.75"	3.625"				
R	Paca-Waiter 300 lbs.	30"x30"x40"	18"	36"	37.5"	32"	30"	28.75"	3.625"				



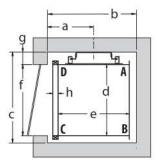
#### OPPOSITE OPENINGS (AB DC) Code 4

	NOT TO MAKE STORY	ay Dir	mensions	5					
	Dumbwaiter Type	Car Size	а	b	С	d	е	f	g
R	Cable-Waiter 100 lbs.	20"x20"x30"	12.375"	24.75"	26.5"	20"	22.25"	18.75"	4.125"
R	Paca-Waiter 200 lbs.	26"x26"x36"	15.375"	30.75"	33.25"	26"	28.25"	24.75"	4.875"
R	Paca-Waiter 300 lbs.	30"x30"x40"	17.375"	34.75"	37.25"	30"	32.25"	28.75"	4.875"



The dumbwaiters listed in the following section are based upon our standard cars. Dumbwaiter cars can be customized to meet your unique needs in accordance with ASME A17.1.

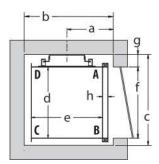
# Steel Car with Bi-parting or Slide-up Gates



#### LEFT OPENING (DC) Code 1

			Finishe	d Hoistw	ay Dii	mensi	ons		
Dumbwaiter Type	Car Size	а	ь	С	d	е	f	g	h
Cable-Waiter 100 lbs.	20"x20"x30"	13"	25"	25.5"	20"	20"	20"	3.5"	1.5"
Paca-Waiter 200 lbs.	26"x26"x36"	16"	31"	33.25"	26"	26"	26"	4.25"	1.5"
Paca-Waiter 300 lbs.	30"x30"x40"	18"	35"	37.25"	30"	30"	30"	4.25"	1.5"
Paca-Waiter 500 lbs.	36"x36"x48"	21"	41"	43.25"	36"	36"	36"	4.25"	1.5"

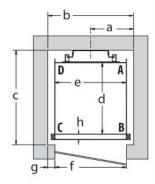
<sup>\*</sup> Slide-up gates not available on CW 100 & PW 200 cars.



#### RIGHT OPENING (AB) Code 2

			Finished Hoistway Dimensions										
	Dumbwaiter Type	Car Size	а	b	С	d	е	f	g	h			
2	Cable-Waiter 100 lbs.	20"x20"x30"	13"	25"	25.5"	20"	20"	20"	3.5"	1.5"			
₹	Paca-Waiter 200 lbs.	26"x26"x36"	16"	31"	33.25"	26"	26"	26"	4.25"	1.5"			
?	Paca-Waiter 300 lbs.	30"x30"x40"	18"	35"	37.25"	30"	30"	30"	4.25"	1.5"			
3	Paca-Waiter 500 lbs.	36"x36"x48"	21"	41"	43.25"	36"	36"	36"	4.25"	1.5"			

<sup>\*</sup> Slide-up gates not available on CW 100 & PW 200 cars.



#### FRONT OPENING (CB) Code 3

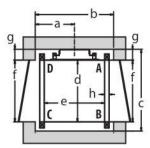
E 20 90 (22.0	2007 1000	Finished Hoistway Dimensions										
Dumbwaiter Type	Car Size	а	b	С	d	е	f	g	h			
Cable-Waiter 100 lbs.	20"x20"x30"	12"	24"	26.5"	20"	20"	20"	2"	1.5"			
Paca-Waiter 200 lbs.	26"x26"x36"	16"	32"	33.25"	26"	26"	26"	3"	1.5"			
Paca-Waiter 300 lbs.	30"x30"x40"	18"	36"	37.25"	30"	30"	30"	3"	1.5"			
Paca-Waiter 500 lbs.	36"x36"x48"	21"	42"	43.25"	36"	36"	36"	3"	1.5"			

<sup>\*</sup> Slide-up gates not available on CW 100 & PW 200 cars.



The dumbwaiters listed in the following section are based upon our standard cars. Dumbwaiter cars can be customized to meet your unique needs in accordance with ASME A17.1.

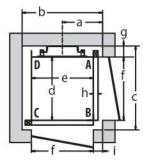
# Steel Car with Bi-parting or Slide-up Gates



#### OPPOSITE OPENINGS (AB DC) Code 4

					Finis	hed Hoist	way D	imens	ions		T I
	Dumbwaiter 7	Гуре	Car Size	а	b	С	d	е	f	g	h
R	Cable-Waiter	100 lbs.	20"x20"x30"	13"	26"	26.5"	20"	20"	20"	3.5"	1.5"
R	Paca-Waiter	200 lbs.	26"x26"x36"	16"	32"	33.25"	26"	26"	26"	4.25"	1.5"
R	Paca-Waiter	300 lbs.	30"x30"x40"	18"	36"	37.25"	30"	30"	30"	4.25"	1.5"
R	Paca-Waiter	500 lbs.	30"x30"x48"	21"	42"	43.25"	36"	36"	36"	4.25"	1.5"

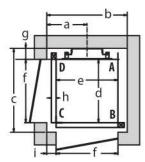
<sup>\*</sup> Slide-up gates not available on CW 100 & PW 200 cars.



#### RIGHT ADJACENT OPENINGS (AB CB) Code 5

ſ				Finished Hoistway Dimensions										
	Dumbwaiter <sup>*</sup>	Туре	Car Size	а	b	С	d	е	f	g	h	i		
R	Cable-Waiter	100 lbs.	20"x20"x30"	13"	26"	26.5"	20"	20"	20"	3.5"	1.5"	3"		
R	Paca-Waiter	200 lbs.	26"x26"x36"	16"	32"	33.25"	26"	26"	26"	4.25"	1.5"	3"		
R	Paca-Waiter	300 lbs.	30"x30"x40"	18"	36"	37.25"	30"	30"	30"	4.25"	1.5"	3"		
R	Paca-Waiter	500 lbs.	36"x36"x48"	21"	42"	43.25"	36"	36"	36"	4.25"	1.5"	3"		

<sup>\*</sup> Slide-up gates not available on CW 100 & PW 200 cars.



#### LEFT ADJACENT OPENINGS (DC BC) Code 6

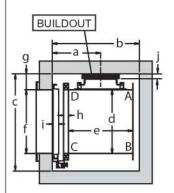
10 1.5 10 10 10 10 10 10 10 10 10 10 10 10 10		Finis	hed Hois	tway	Dime	nsion	s		
Dumbwaiter Type Car Si:	ze A	В	С	D	E	F	G	Н	1
Cable-Waiter 100 lbs. 20"x20":	x30" 13"	26"	26.5"	20"	20"	20"	3.5"	1.5"	3"
Paca-Waiter 200 lbs. 26"x26":	x36" 16"	32"	33.25"	26"	26"	26"	4.25"	1.5"	3"
Paca-Waiter 300 lbs. 30"x30"	x40" 18"	36"	37.25"	30"	30"	30"	4.25"	1.5"	3"
Paca-Waiter 500 lbs. 36"x36":	x48" 21"	42"	43.25"	36"	36"	36"	4.25"	1.5"	3"

<sup>\*</sup> Slide-up gates not available on CW 100 & PW 200 cars.



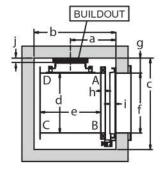
The dumbwaiters listed in the following section are based upon our standard cars. Dumbwaiter cars can be customized to meet your unique needs in accordance with ASME A17.1.

# Steel Car with Bi-parting or Slide-up Gates and Commercial Doors



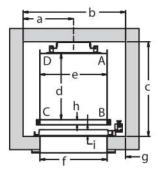
#### LEFT OPENING (DC) Code 1

					Finish	ed Hoist	way [	Dimer	sions				
	Dumbwaiter Typ	oe	Car Size	а	b	С	d	e	f	g	h	i	j
C	Paca-Waiter 30	0 lbs.	30"x30"x40"	20"	37"	41.25"	30"	30"	30"	5"	1.5"	2"	.75"
C	Paca-Waiter 50	0 lbs.	36"x36"x48"	23"	43"	47.25"	36"	36"	36"	5"	1.5"	2"	.75"



#### RIGHT OPENING (AB) Code 2

			Finished Hoistway Dimensions										
	Dumbwaiter	Type	Car Size	а	b	C	d	e	f	g	h	1	j
c	Paca-Waiter	300 lbs.	30"x30"x40"	20"	37"	41.25"	30"	30"	30"	5"	1.5"	2"	.75"
c	Paca-Waiter	500 lbs.	36"x36"x48"	23"	43"	47.25"	36"	36"	36"	5"	1.5"	2"	.75"



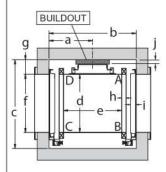
#### FRONT OPENING (CB) Code 3

	Finished Hoistway Dimensions											
	Dumbwaiter	Type	Car Size	а	b	С	d	е	f	g	h	į
c	Paca-Waiter	300 lbs.	30"x30"x40"	20"	41.25"	39.25"	30"	30"	30"	6.25"	1.5"	2"
C	Paca-Waiter	500 lbs.	36"x36"x48"	23"	47.25"	45.25"	36"	36"	36"	6.25"	1.5"	2"



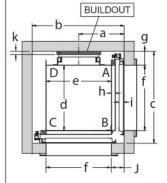
The dumbwaiters listed in the following section are based upon our standard cars. Dumbwaiter cars can be customized to meet your unique needs in accordance with ASME A17.1.

# **Steel Car with Bi-parting or Slide-up Gates** and Commercial Doors



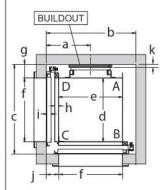
#### OPPOSITE OPENINGS (AB DC) Code 4

Finished Hoistway Dimensions												
Dumbwaiter	Type	Car Size	а	b	С	d	е	f	g	h	i	j
Paca-Waiter	300 lbs.	30"x30"x40"	20"	40"	41.25"	30"	30"	30"	5"	1.5"	2"	.75"
Paca-Waiter	500 lbs.	36"x36"x48"	23"	46"	47.25"	36"	36"	36"	5"	1.5"	2"	.75"



#### RIGHT ADJACENT OPENINGS (AB CB) Code 5

	Finished Hoistway Dimensions											
Dumbwaiter Type	Car Size	a	b	С	d	е	f	g	h	i	j	k
C Paca-Waiter 300 lbs.	30"x30"x40"	20"	41.25"	41.25"	30"	30"	28"	6.25"	1.5"	2"	7"	2"
C Paca-Waiter 500 lbs.	36"x36"x48"	23"	47.25"	47.25"	36"	36"	34"	6.25"	1.5"	2"	7"	2"

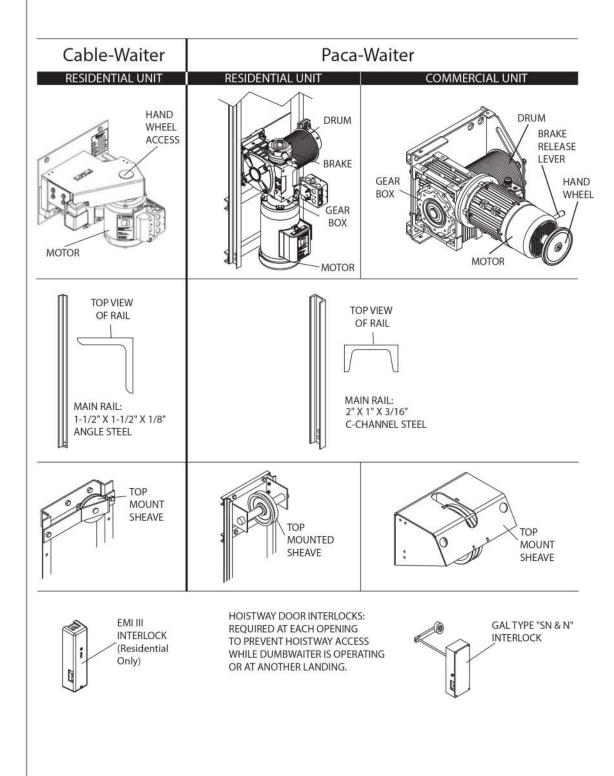


#### LEFT ADJACENT OPENINGS (DC BC) Code 6

Notes to the an			Fin	ished H	loist	way I	Dime	nsion	5			
Dumbwaiter Type	Car Size	а	b	c	d	е	f	g	h	i	j	k
C Paca-Waiter 300 lbs.	30"x30"x40"	20"	41.25"	41.25"	30"	30"	28"	6.25"	1.5"	2"	7"	2"
C Paca-Waiter 500 lbs.	36"x36"x48"	23"	47.25"	47.25"	36"	36"	34"	6.25"	1.5"	2"	7"	2"



# Typical Dumbwaiter Equipment





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