

ARCHITECTURAL PLANNING GUIDE 1991

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ELEVATORS • ESCALATORS • POWER WALKS • POWER RAMPS


montgomery[®]
excellence at every level



excellence at every level

Montgomery is a corporation devoted to **excellence at every level**. We have chosen one industry in which to invest our time and our dedication. We design, sell, manufacture, install, modernize and service *vertical transportation products*.

Our complete product line includes Passenger, Service & Freight Elevators (Gearless & Geared Traction and Hydraulic), Escalators, Power Walks, Power Ramps, specialized lift equipment, Preventive Maintenance Service and Modernization products.

Montgomery professionals are located in over 55 fully staffed Montgomery sales and construction offices and over 225 separate service locations throughout the U.S. Regardless of the diverse regimens of our people, you will find that they form a cohesive group dedicated to providing excellent products at a fair price.

Our sales personnel are highly trained *professionals*. Their job involves the provision of project planning, building traffic analysis, specification & layout assistance and complete job follow-through. We are proud of the service which we provide to each and every Montgomery customer.

MEGATECH[®] Elevator Advanced Components:

Since 1892, Montgomery customers have been the beneficiaries of our investment in the latest advancements in technology and our dedication to the highest standards of quality in the design and the manufacture of *vertical transportation equipment*. We absolutely believe that all of our advancements and our technical excellence must *support our customers*. Our designs must work to the highest standards of our company and in complete fulfillment of our customers' expectations.

Montgomery has long been recognized as a pioneer in many new concepts and application approaches which have become our industry standards. We continue to expand the family of advanced power controls, programmable logic controls along with products incorporating 21st century component designs...**MEGATECH ELEVATOR ADVANCED COMPONENTS**. These products provide performance and service value. Montgomery products add value to the structures in which they are installed.

All of us at Montgomery invite you to call upon us for our professional services. We enjoy our work and are confident you will enjoy working with us.



Elevator Fixture System



Elevator Fixture System



Lightweight/High Strength Passenger Elevator Enclosure



Standard/Steel Passenger Elevator Enclosure



Standard Geared Traction Passenger Elevator System



Standard Holeless Hydraulic Passenger Elevator System



Standard Holeless Hydraulic Passenger Elevator System



Standard Inground Hydraulic Passenger Elevator System



Reprogrammable Microcomputer Elevator Motion Control



Solid State High Performance D.C. Power Control



Elevator Modernization Overlay Control Product



Total Elevator Diagnostic System

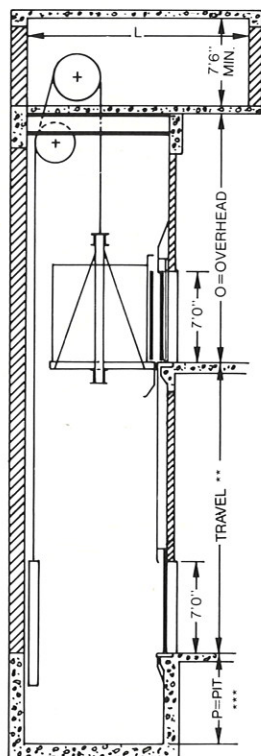
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TRACTION PASSENGER ELEVATORS

High Speed:

High-Speed Traction Elevators meet the need for high quality performance with speeds to 1200 FPM. Heavy traffic demands are served by MIPROM II® Microcomputer Group Logic Systems.

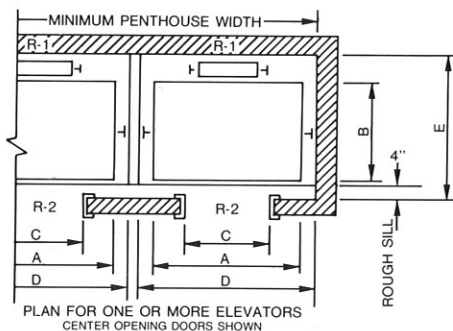


Moderate Speed:

Moderate Speed Traction Elevators perform efficiently and economically when serving traffic demands in medium and low rise buildings.

HANDICAPPED REQUIREMENTS AVAILABLE TO MEET NEII STANDARDS, LOCAL CODES OR LAWS.
 National Elevator Industry, Inc. (NEII) Handicapped Standards are:
 Placement of car controls, hall buttons and phone (or intercommunication equipment) for easy access.
 Tactile markings for operating switches, buttons and hoistway door jams.
 Handrails in car—dual ray door protection—audible signals in car position indicator and lanterns.
 CAR SIZE: Certain minimums may apply. Consult your Montgomery Professional.

For hoistway entrance and sill detail information see page 7.



RECOMMENDED SIZES AND CAPACITIES				
TYPE BUILDING	SMALL OFFICE	AVERAGE OFFICE HOTEL		LARGE OFFICE OR STORE
CAPACITY	2000#	2500#	3000#	3500#
A	6' - 0"	7' - 0"	7' - 0"	7' - 0"
B	5' - 0"	5' - 0"	5' - 6"	6' - 2"
C	3' - 0"	3' - 6"	3' - 6"	3' - 6"
D	7' - 4"	8' - 4"	8' - 4"	8' - 4"
E	6' - 10"	6' - 10"	7' - 4"	8' - 0"

CAPACITY	OVERHEAD LOADS/LBS. (APPROXIMATE) PER ELEVATOR							
	UP TO 350 FPM		400 FPM		500 FPM-TO-700 FPM		800 FPM-TO-1200 FPM	
	R-1	R-2	R-1	R-2	R-1	R-2	R-1	R-2
2000#	18500	9500	N/A	N/A	N/A	N/A	N/A	N/A
2500#	22000	11500	25000	15000	28000	18000	31000	21000
3000#	23000	11500	26000	15000	29000	18000	32000	22000
3500#	24500	13000	28000	16000	30000	19000	33000	23000

MINIMUM PIT—OVERHEAD & MACHINE ROOM DIMENSIONS										
SPEED	200	300	350	400	500	600	700	*800	*1000	*1200
L	16'-0"	15'-0"	15'-0"	15'-0"	18'-6"	18'-6"	18'-6"	18'-6"	18'-6"	18'-6"
O	14'-8"	15'-4"	15'-4"	16'-8"	17'-6"	18'-6"	19'-6"	21'-6"	21'-6"	23'-0"
P	4'-0"	5'-0"	5'-0"	5'-7"	7'-8"	8'-6"	9'-2"	12'-0"	12'-0"	12'-0"

NOTES:

- Duties noted conform to Montgomery **system 90s** standard Geared Traction applications. Consult your Montgomery Professional for more information on **system 90s**.
- Reactions include allowances for impact but DO NOT include weight of concrete slab.
- Pit depths, overhead clearance and penthouse sizes are in accordance with ANSI/ASME code requirements. Local codes may vary these requirements.
- Add 5" to "E" for counterweight with safety.
- Layouts and dimensions shown are for center opening type entrances. Other types available.
- Dimension "O" based on standard height elevator cab.
- All data is general. Sizes/speeds shown explain frequently used duties. Number of floors served, car size, speed and cab design are the result of actual application. Consult your Montgomery Professional for specific recommendations where space is limited and/or other conditions necessitate further study. Your Montgomery Professional can help provide exact information for your working drawings.
- Add 2" to Dimension "D" for car speed over 700 FPM.
- When car travel is over 150 feet, add 1/4" to overall hoistway width and depth for each additional 25 feet of travel.
- Increase pit dimension for 400 FPM to 7'-8" where Cable COMPENSATION is required.



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PASSENGER ELEVATORS

Basement Type—Moderate Speed:

Basement type traction elevators are utilized for limited overhead conditions in new and existing buildings. The hoisting machine is off-set at the side of the hoistway. The machine may be located at any suitable elevation and need not be at the "basement." This type of elevator facilitates future floor expansion.

HANDICAPPED REQUIREMENTS AVAILABLE TO MEET NEII STANDARDS, LOCAL CODES OR LAWS.

National Elevator Industry, Inc. (NEII) Handicapped Standards are:

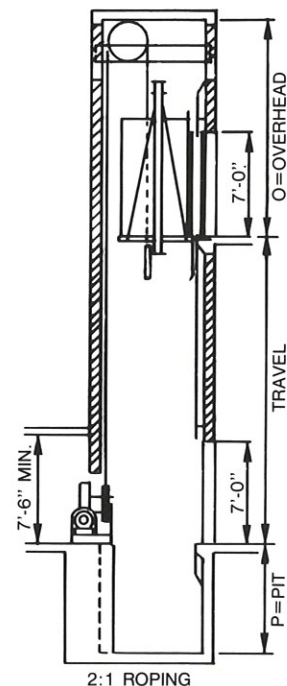
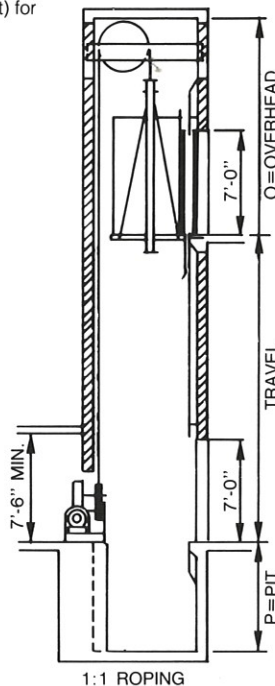
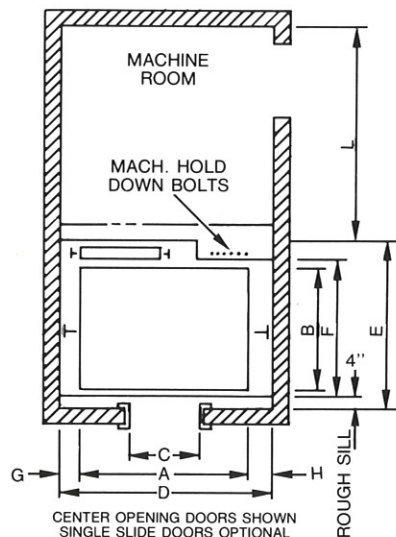
Placement of car controls, hall buttons and phone (or intercommunication equipment) for easy access.

Tactile markings for operating switches, buttons and hoistway door jams.

Handrails in car—dual ray door protection—audible signals in car position indicator and lanterns.

CAR SIZE: Certain minimums may apply. Consult your Montgomery Professional.

For hoistway entrance and sill detail information see page 7.



1:1 ROPING ARRANGEMENT
is used when only moderate overhead clearance is available, and only when a shallow pit depth is feasible.

RECOMMENDED SIZES & CAPACITIES

TYPE BUILDING	APARTMENT OR SMALL OFFICE	AVERAGE OFFICE HOTEL		LARGE OFFICE OR STORE
CAPACITY	2000#	2500#	3000#	3500#
A	6'- 0"	7'- 0"	7'- 0"	7'- 0"
B	5'- 0"	5'- 0"	5'- 6"	6'- 2"
C	3'- 0"	3'- 6"	3'- 6"	3'- 6"
D	7'- 10"	8'- 4"	8'- 4"	8'- 4"
E	6'- 10"	6'- 10"	7'- 4"	8'- 0"
F	5'- 5"	5'- 5"	5'- 11"	6'- 7"
G	11"	8"	8"	8"
H	11"	8"	8"	8"

RECOMMENDED MACHINE ROOM OVERHEAD & PIT DIMENSIONS

SPEED	100	200	250	300	350
L	10'-6"	10'-6"	10'-6"	10'-6"	10'-6"
O	16'-7"	17'-1"	17'-5"	17'-6"	17'-9"
P	4'-0"	5'-0"	5'-0"	5'-0"	5'-0"

2:1 ROPING ARRANGEMENT

permits a minimum overhead installation. Because of the sheave arrangement, it is necessary to have a greater pit depth than for a comparable 1:1 installation.

RECOMMENDED SIZES & CAPACITIES

TYPE BUILDING	APARTMENT OR SMALL OFFICE	AVERAGE OFFICE HOTEL	
CAPACITY	2000#	2500#	3000#
A	6'- 0"	7'- 0"	7'- 0"
B	5'- 0"	5'- 0"	5'- 6"
C	3'- 0"	3'- 6"	3'- 6"
D	7'-10"	8'-10"	8'-10"
E	6'-10"	6'-10"	7'- 4"
F	5'- 5"	5'- 5"	5'-11"
G	10"	10"	10"
H	12"	12"	12"

RECOMMENDED MACHINE ROOM OVERHEAD & PIT DIMENSIONS

SPEED	100	200	250	300	350
L	10'- 6"	10'- 6"	10'- 6"	10'- 6"	10'- 6"
O	13'- 0"	13'- 2"	13'- 7"	13'- 8"	14'- 0"
P	5'- 6"	6'- 6"	6'- 11"	7'- 4"	7'- 4"

NOTES:

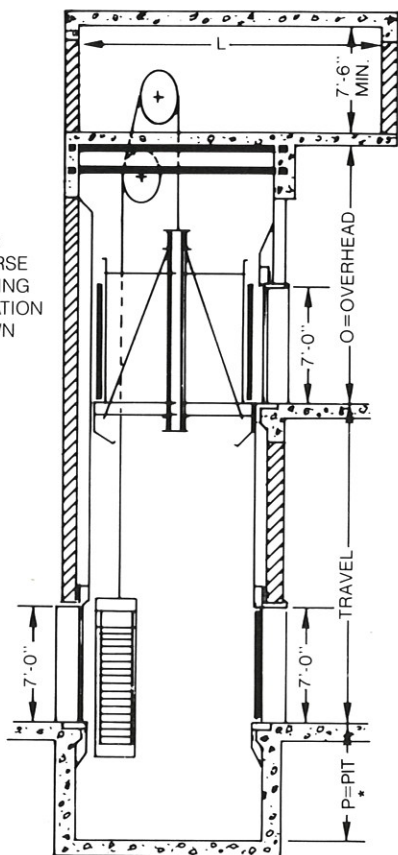
- Pit depths, overhead clearance and penthouse sizes are in accordance with ANSI/ASME code requirements. Local codes may vary these requirements.
- Add 5" to "E" for counterweight with safety at speeds of 200 FPM or more.
- Layouts and dimensions shown are for center opening type entrances.

- Dimension "O" based on standard height elevator cab.
- All data is general. Sizes/speeds shown explain frequently used duties. Number of floors served, car size, speed and cab design are the result of actual application. Consult your Montgomery Professional for specific recommendations where space is limited and/or other conditions necessitate further study. Your Montgomery Professional can help provide exact information for your working drawings.

Hospital Shape (Passenger/Service):

Passenger/Service (Hospital Shape) Traction Elevators are designed in a wide range of speeds for individual applications. Emergency and independent service as well as auxiliary power features are available.

NOTE:
 REVERSE
 OPENING
 ELEVATION
 SHOWN



HANDICAPPED REQUIREMENTS AVAILABLE TO MEET NEII STANDARDS, LOCAL CODES OR LAWS.

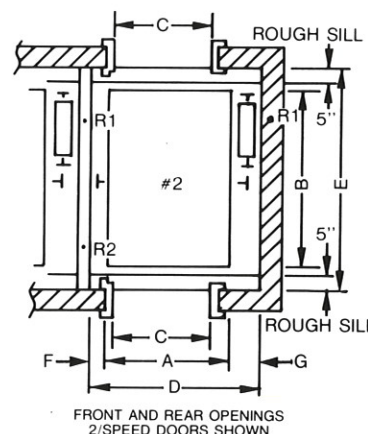
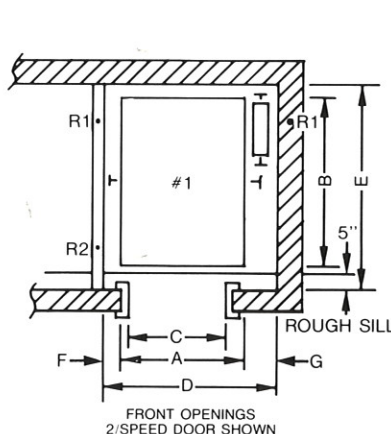
National Elevator Industry, Inc. (NEII) Handicapped Standards are:
 Placement of car controls, hall buttons and phone (or intercommunication equipment) for easy access.

Tactile markings for operating switches, buttons and hoistway door jambs.

Handrails in car—dual ray door protection—audible signals in car position indicator and lanterns.

CAR SIZE: Certain minimums may apply. Consult your Montgomery Professional.

For hoistway entrance and sill detail information see page 7.



ONE OR MORE ELEVATORS

RECOMMENDED SIZES & CAPACITIES								
CAPACITY	3500#		4000#		4500#		5000#	
	#1	#2	#1	#2	#1	#2	#1	#2
A	5'-4"	5'-4"	5'-8"	5'-8"	5'-8"	5'-8"	6'-4"	6'-4"
B	8'-4"	9'-0"	8'-8"	9'-4"	9'-4"	10'-0"	8'-10"	9'-6"
C	3'-8"	3'-8"	4'-0"	4'-0"	4'-0"	4'-0"	4'-6"	4'-6"
D	7'-4"	7'-4"	7'-8"	7'-8"	7'-8"	7'-8"	8'-4"	8'-4"
E	9'-3"	10'-3 1/2"	9'-7"	10'-7 1/2"	10'-3"	11'-3 1/2"	9'-9"	10'-9 1/2"
F	8"	8"	8"	8"	8"	8"	8"	8"
G	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"	1'-4"
MINIMUM PIT, OVERHEAD AND MACHINE ROOM DIMENSIONS								
SPEED	100		200		350		500	
L	18'-0"		18'-0"		18'-0"		19'-0"	
O	15'-6"		15'-9"		16'-6"		17'-7"	
P	4'-0"		4'-0"		5'-1"		6'-7"	

APPROXIMATE OVERHEAD LOADS/LBS. PER PASSENGER ELEVATOR		
CAPACITY	R-1	R-2
3500	28500	10500
4000	29500	11000
4500	30500	11500
5000	36000	15500

NOTES:

- Reactions include allowances for impact but DO NOT include weight of concrete slab.
- Pit depths, overhead clearance and penthouse sizes are in accordance with ANSI/ASME code requirements. Local codes may vary these requirements.
- Add 5" to "D" for counterweight with safety at speeds of 200 FPM or more.
- Layouts and dimensions shown are for two speed type entrances.
- Dimension "O" based on standard height elevator cab.

- All data is general. Sizes/speeds shown explain frequently used duties. Number of floors served, car size, speed and cab design are the result of actual application. Consult your Montgomery Professional for specific recommendations where space is limited and/or other conditions necessitate further study. Your Montgomery Professional can help provide exact information for your working drawings.

* 5'-0" Pit required when "B" exceeds 9'-0".

** 5'-6" Pit required when "B" exceeds 9'-0".

*** 7'-8" Pit required with cable compensation.



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PASSENGER & SERVICE ELEVATORS

Hydraulic:

Hydraulic Elevators are designed to meet varying performance requirements with car speeds to 200 feet per minute and maximum travel to 70 feet. They are easily adapted to most low rise buildings and frequently produce economic advantages over hoist rope traction elevators.

HANDICAPPED REQUIREMENTS AVAILABLE TO MEET NEII STANDARDS, LOCAL CODES OR LAWS.

National Elevator Industry, Inc. (NEII) Handicapped Standards are:

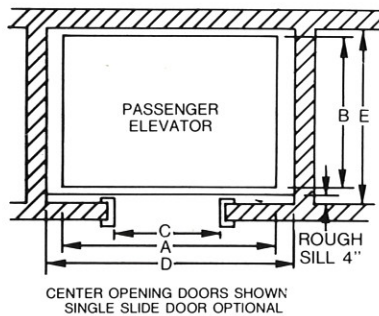
Placement of car controls, hall buttons and phone (or intercommunication equipment) for easy access.

Tactile markings for operating switches, buttons and hoistway door jambs.

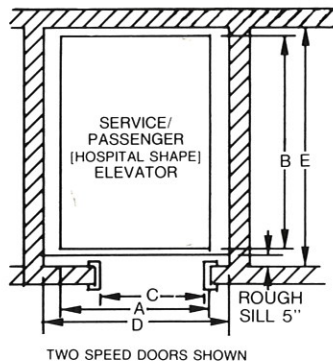
Handrails in car—dual ray door protection—audible signals in car position indicator and lanterns.

CAR SIZE: Certain minimums may apply. Consult your Montgomery Professional.

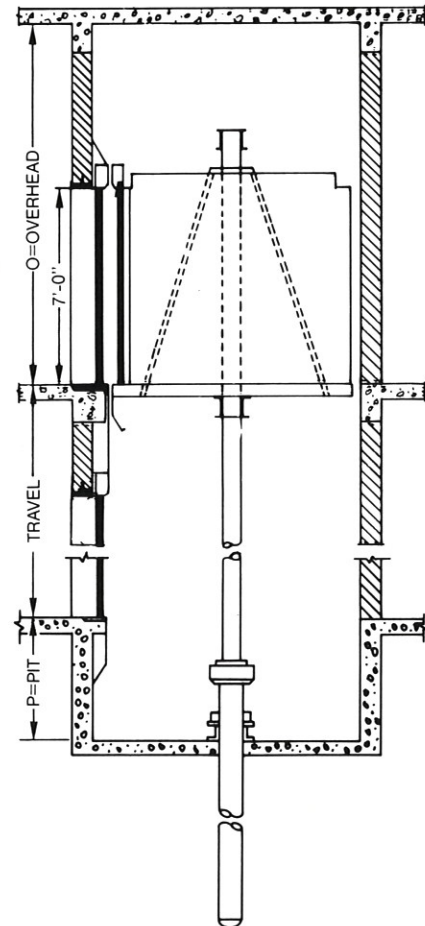
For hoistway entrance and sill detail information see page 7.



DETAIL X



DETAIL Y



DETAIL Z

FOR OFFICE BUILDINGS, HOTELS, MOTELS, APARTMENTS, BANKS, STORES, LIBRARIES, ETC. (Details X & Z)						
CAPACITY	1500#	2000#	2500#	3000#	3500#	
A	4'-10"	6'-0"	7'-0"	7'-0"	7'-0"	8'-0"
B	5'-0"	5'-0"	5'-0"	5'-6"	6'-2"	5'-6"
C	2'-8"	3'-0"	3'-6"	3'-6"	3'-6"	4'-0"
D	6'-8"	7'-4"	8'-4"	8'-4"	8'-4"	9'-4"
E	5'-9"	5'-9"	5'-9"	6'-3"	6'-11"	6'-3"
O	12'-8"	12'-8"	12'-8"	12'-8"	12'-8"	12'-8"
P	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"

HOSPITALS AND INSTITUTIONS (Details Y & Z)						
1 - Single Entrance 2 - Double Entrance						
CAPACITY	3500#		4000#		4500#	
	1	2	1	2	1	2
A	5'-4"	5'-4"	5'-8"	5'-8"	5'-8"	5'-8"
B	8'-4"	9'-0"	8'-8"	9'-4"	9'-4"	10'-0"
C	3'-8"	3'-8"	4'-0"	4'-0"	4'-0"	4'-0"
D	6'-9"	6'-9"	7'-4"	7'-4"	7'-4"	7'-4"
E	9'-3"	10'-3 1/2"	9'-7"	10'-7 1/2"	10'-3"	11'-3 1/2"
O	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"	13'-0"
P	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"	4'-0"

NOTES:

1. A legal machine room meeting Code requirements and ventilated with temperature maintained between 65° and 100°F must be provided. Machine room location preferably should be at the lowest landing adjacent to the hoistway. Machine room size varies depending on capacity and speed of elevator. Consult your Montgomery Professional for the exact size.
2. Pit depths and overhead clearances are in accordance with ANSI/ASME code requirements. Local codes may vary these requirements.
3. Layout and dimensions shown for passenger elevators based on center opening type entrances and for hospital elevators based on two speed type entrances.
4. Dimension "O" based on standard height elevator cab.
5. All data is general. Sizes/speeds shown explain frequently used duties. Number of floors served, car size, speed and cab design are the result of actual application. Consult your Montgomery Professional for specific recommendations where space is limited and/or other conditions necessitate further study. Your Montgomery Professional can help provide exact information for your working drawings.

ELEVATOR ENTRANCES

Passenger Entrances:

Montgomery standard entrances, as shown, are available in a wide range of finishes and materials designed for masonry wall installation (as shown) and also drywall application. Custom entrances are also available. Contact your local Montgomery Professional for details.

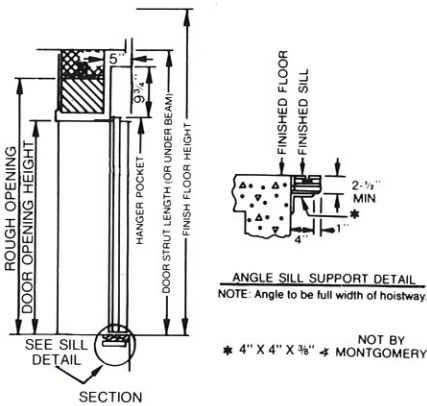
NOTE: Wherever possible, front hoistway walls should not be erected until after door equipment is installed.

ROUGH OPENING (for standard unit-type frames installed in masonry walls):

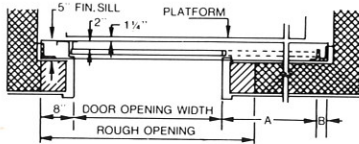
Width of door opening plus 8" on each side. Height of door opening plus 8" above.

Single Speed Slide:

Maximum opening width approximately 1/2 width of car. Opening width should not exceed 3'-6". Provides a sliding door at moderate cost. "Left Hand" shown. "Right Hand" available.

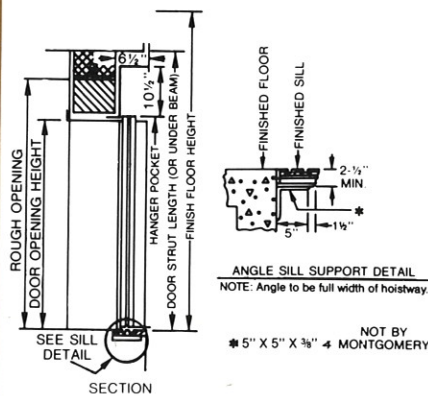


A = Door opening + 1-1/2"
B = 5" (Power doors)

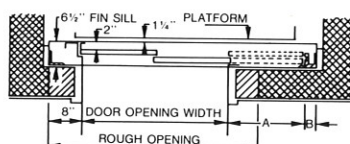


Two Speed Slide:

Door opening is approximately 2/3 width of car. "Left Hand" shown. "Right Hand" available.

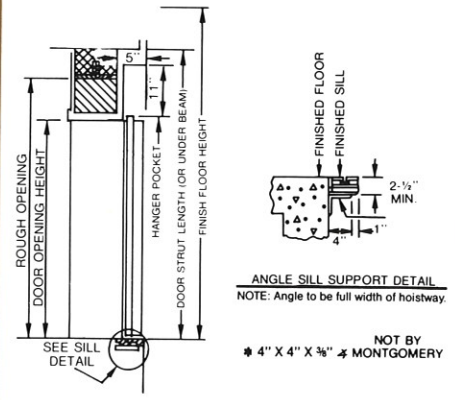


A = 1/2 Door opening + 1-1/8"
B = 5" (Power doors)

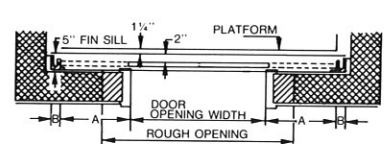


Center Opening Slide:

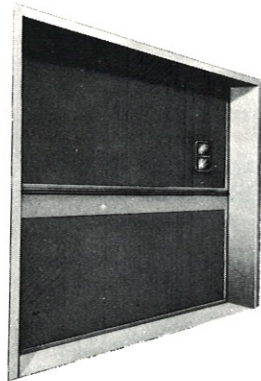
Opening is approximately 1/2 width of car. Simultaneous opening of each door panel, at equal speed, reduces opening time to 1/2 that required for other types of sliding doors.



A = 1/2 Door opening + 3/4"
B = 5" (Power doors)

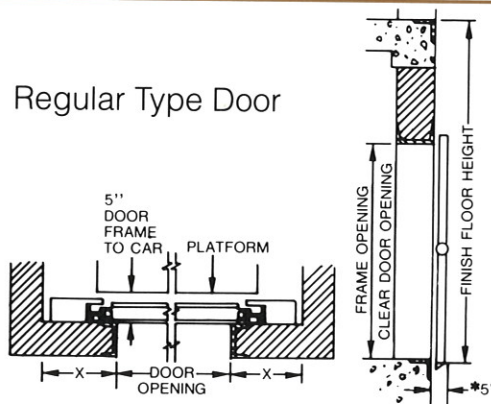


Freight Doors:



NOTE:
FREIGHT DOOR FRAMES
AND SILLS NOT BY
MONTGOMERY

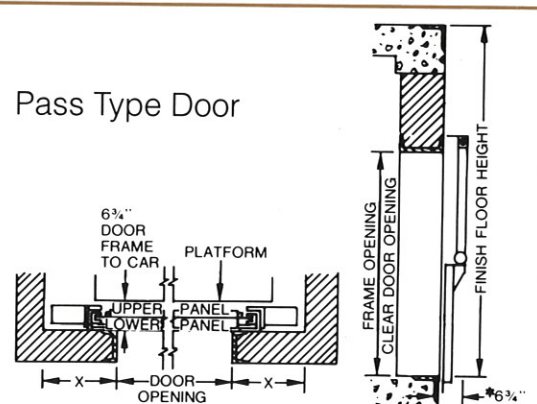
Regular Type Door



MINIMUM FLOOR HEIGHT BASED ON OPENING HEIGHT OF DOOR		
OPENING HEIGHT OF DOOR	REGULAR TYPE DOOR	*PASS TYPE DOOR
6'-6"	10'-3"	9'-3"
7'-0"	11'-0"	9'-9"
7'-6"	11'-9"	10'-3"
8'-0"	12'-6"	10'-9"
8'-6"	13'-3"	11'-3"
9'-0"	14'-0"	11'-9"
10'-0"	15'-6"	12'-9"

*Minimum floor heights shown for pass type doors may be reduced by using special constructed doors. Consult your local Montgomery Professional for exact information for your drawings.

Pass Type Door



DIMENSION KEY

X - 13" minimum return required for motorized door of either type shown.
X - 9" minimum return required for manual door of either type shown. Minimum pit depth = 1/2 door height plus 6". Pit depth for door may be more or less than pit depth required for elevator, depending on height of door. Door frames must extend to the floor beam above unless walls are poured concrete or brick.



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PASSENGER ELEVATORS



Holeless Hydraulic
(two landing)



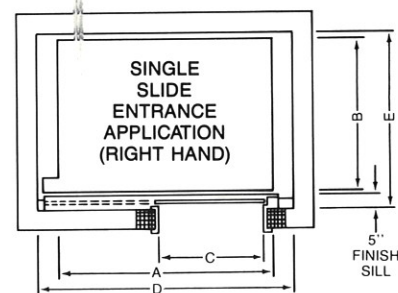
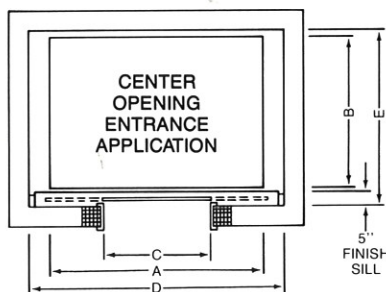
Holeless Hydraulic
(three landing)



Inground Hydraulic
(three landing)

Montgomery offers a complete line of standard, quick delivery, competitively priced Hydraulic Passenger Elevators providing service for two and three landing structures. HH-Series Elevators (HH-II & HH-III) and the MX-3 offer the benefits of short lead time for fabrication and shipment as well as installation. HH-Series units are offered in two sizes while the MX-3 elevator is offered in a third size. In every case, all necessary approvals are accomplished on a single sheet!

Depending upon the unit chosen, and because of the broad range of STANDARD FEATURES made available on these units, Montgomery is able to fabricate and ship all necessary material in as little as six-to-eight weeks from the date of order and approval receipt. Regardless of their standardization and quick lead time characteristics, there is no customer sacrifice in the flexibility of entrance and decor options to "customize" any of these Passenger Elevators. The Montgomery Triad® Passenger Elevator Car is standard on all three elevators.



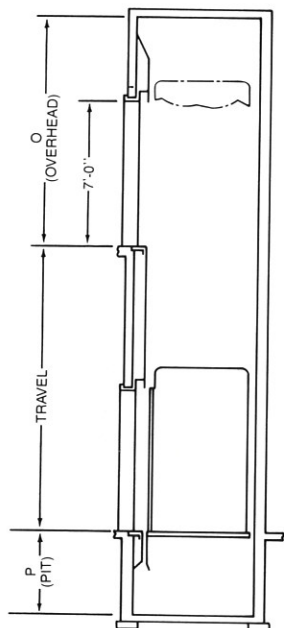
HH-SERIES (HH-II® & HH-III®) CAPACITIES - SPEEDS - GENERAL DATA - SPACE REQUIREMENTS			
Type		Holeless Hydraulic	
Service		Passenger	
Speed		80 FPM & 125 FPM	
Capacity		2000 lbs.	2500 lbs.
Clear Car Size (Wide x Deep)		5'-8" x 4'-3"	6'-8" x 4'-3"
Alphabetical Dimensions	A	6'-0"	7'-0"
	B	5'-0"	5'-0"
	C	3'-0"	3'-6"
	D	7'-4"	8'-4"
	E	5'-9"	5'-9"
	(pit) P	4'-0"	4'-0"
Overhead (O)		Consult your Montgomery Professional	
Machine Room (W x D x H)		7'-6" x 5'-0" x 7'-6" (minimum)	
Entrance Types (All 7'-0" High)		Single Slide R/H - Standard Single Slide L/H - Optional Center Opening - Optional	
Models Available		HH-II®	HH-III®
Landings Served		Two (2) Inline	Three (3) Inline
Minimum Travel		8'-4"	16'-8"
Maximum Travel		20'-0" *	20'-0" *

Notes:

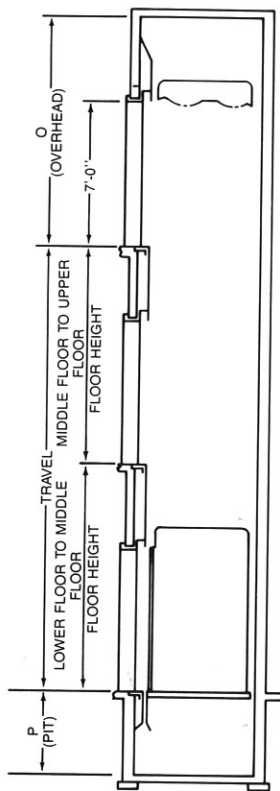
- HANDICAPPED REQUIREMENTS AVAILABLE TO MEET NEII STANDARDS, LOCAL CODES OR LAWS.
National Elevator Industry, Inc. (NEII)
Handicapped Standards are:
 - Placement of car controls, hall buttons and phone (or intercommunication equipment) for easy access.
 - Tactile markings for operating switches, buttons and hoistway door jambs.
 - Handrails in car—dual ray door protection—audible signals in car position indicator and lanterns.
 - CAR SIZE: Certain minimums may apply. Consult your Montgomery Professional.
- For Hoistway entrance and sill detail information see page 7.
- A legal machine room meeting code requirements and ventilated with temperature between 65° and 100°F must be provided.

excellence at every level

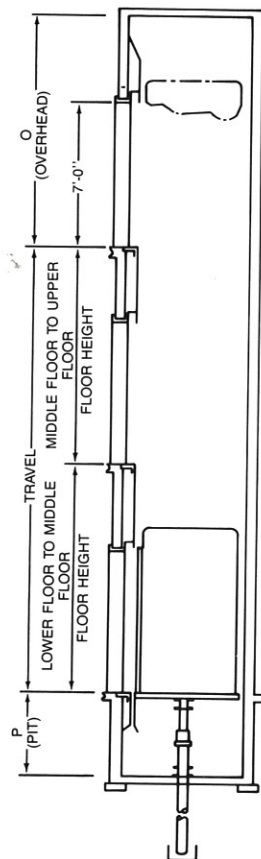
14200/MON
BuyLine 3185



HH-11® ELEVATION



HH-111® ELEVATION



MX-3® ELEVATION

4. Pit depth and overhead clearance are in accordance with ANSI/ASME code requirements. Local codes may vary these requirements.
5. Consult your local Montgomery Office for more information regarding Notes 3 and 4.
6. All data is general. Consult your local Montgomery Professional for exact information for your working drawings.
7. R/H=RIGHT HAND

[i.e. Standing in car facing door
Door OPENS to right.]

L/H=LEFT HAND

*For HH-Series, actual travel may require either jack blockouts or holes in pit floor. Consult your Montgomery Professional.

MX-3® CAPACITIES - SPEEDS - GENERAL DATA - SPACE REQUIREMENTS				
Type		Inground Hydraulic		
Service		Passenger		
Speed		80 FPM & 125 FPM		
Capacity		2000 lbs.	2500 lbs.	3000 lbs.
Clear Car Size (Wide x Deep)		5'-8" x 4'-3"	6'-8" x 4'-3"	6'-8" x 4'-9"
Alphabetical Dimensions	A	6'-0"	7'-0"	7'-0"
	B	5'-0"	5'-0"	5'-6"
	C	3'-0"	3'-6"	3'-6"
	D	7'-4"	8'-4"	8'-4"
	E	5'-9"	5'-9"	6'-3"
	(pit) P	4'-0"	4'-0"	4'-0"
Overhead (O)		12'-2" @ 80 FPM 12'-4" @ 125 FPM		
Machine Room (W x D x H)		7'-6" x 5'-0" x 7'-6" (minimum)		
Entrance Types (All 7'-0" High)		Single Slide R/H - Standard Single Slide L/H - Optional Center Opening - Optional		
Landings Served		Three (3) Inline		
Minimum Travel		16'-8"		
Maximum Travel		25'-0"		



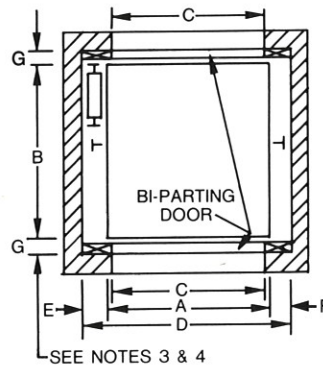
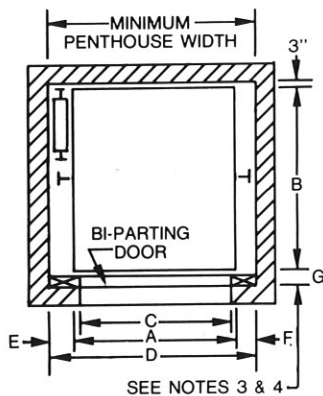
montgomery®

FREIGHT ELEVATORS

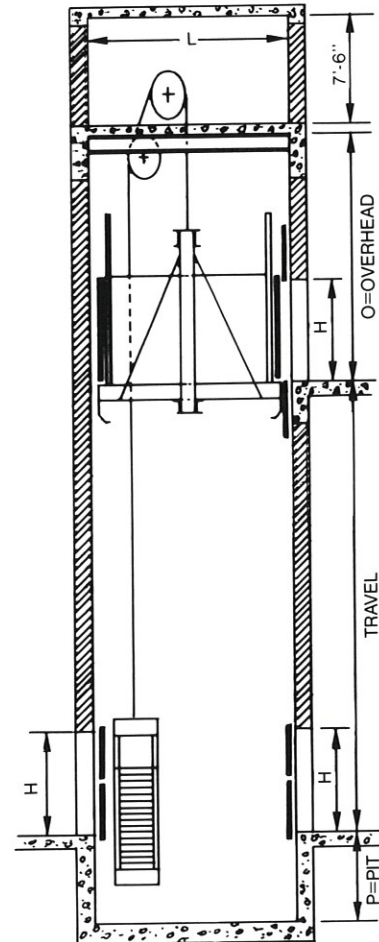
Traction:

Traction Freight Elevators meet and exceed the heavy duty requirements of freight type loading. Special applications are available to meet unusual and hazardous conditions. As an optional feature we recommend our automatic load weighing device, which warns against overloading. Also recommended are power operated hoistway doors and car gate(s) for medium and heavy duty installations.

For freight door details see page 7.



For further information regarding ANSI/ASME Freight Elevator Loading Classifications (Classes A, B, C-1, C-2 & C-3) consult your local Montgomery Professional.



LIGHT AND MEDIUM DUTY FREIGHT ELEVATORS

CAPACITY	2500#	3000#	4000#	6000#	8000#
A	5'- 4"	6'- 4"	6'- 4"	8'- 4"	8'- 4"
B	7'- 0"	8'- 0"	8'- 0"	10'- 0"	10'- 0"
C	5'- 0"	6'- 0"	6'- 0"	8'- 0"	8'- 0"
D	7'-10"	8'-10"	8'-10"	10'-10"	10'-10"
E	1'- 7"	1'- 7"	1'- 7"	1'- 7"	1'- 7"
F	11"	11"	11"	11"	11"
L	13'- 0"	14'- 0"	14'- 0"	14'- 0"	14'- 0"

MINIMUM PIT & OVERHEAD DIMENSIONS FOR LIGHT & MEDIUM DUTY FREIGHT ELEVATORS

CAR SPEED	50	75	100	200
O	16'-0"	16'-0"	16'-0"	16'-0"
P	5'-6"	5'-6"	5'-6"	6'-0"

HEAVY DUTY POWER TRUCK LOADING FREIGHT ELEVATORS

CAPACITY	10,000#	12,000#	16,000#	18,000#	20,000#
A	8'- 4"	10'- 4"	10'- 4"	10'- 4"	12'- 4"
B	12'- 0"	14'- 0"	14'- 0"	16'- 0"	20'- 4"
C	8'- 0"	10'- 0"	10'- 0"	10'- 0"	12'- 0"
D	11'- 4"	13'- 6"	14'- 0"	14'- 2"	16'- 6"
E	1'- 7"	1'- 7"	1'- 7"	1'- 7"	1'- 7"
F	11"	11"	11"	11"	11"
L	14'- 0"	15'- 0"	15'- 0"	17'- 0"	21'- 0"

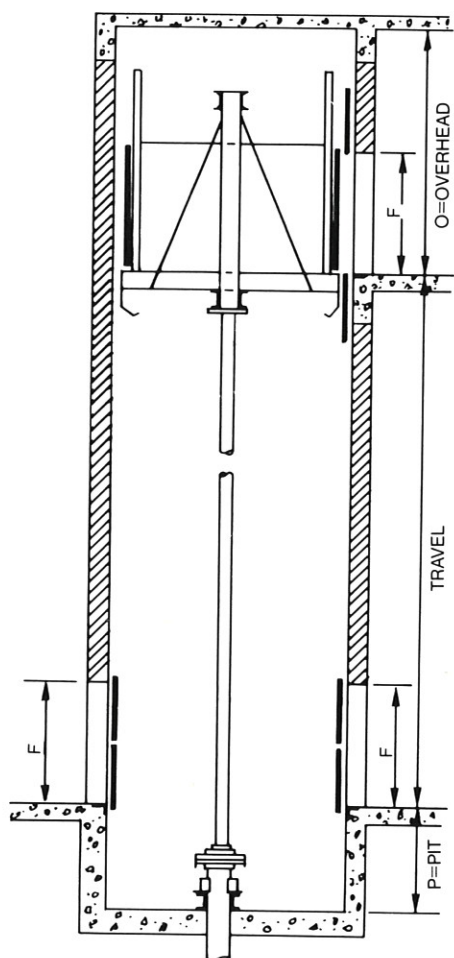
MINIMUM PIT & OVERHEAD DIMENSIONS FOR HEAVY DUTY POWER TRUCK FREIGHT ELEVATORS

CAR SPEED	50	75	100	200
O	Consult your Montgomery Professional			
P				

NOTES:

- Pit depths, overhead clearance and penthouse sizes are in accordance with ANSI/ASME code requirements. Local codes may vary these requirements.
- For capacities over 20,000 lbs. or speeds over 200 FPM, consult your Montgomery Professional.
- Dimension G = 5" for regular type counter balanced hoistway doors and 6 3/4" for pass type counter balanced hoistway doors.
- Pass type hoistway doors are required when floor heights are less than 11'-0" for 7'-0" openings and less than 14'-0" for 9'-0" openings. See chart on page 7 for other door sizes.

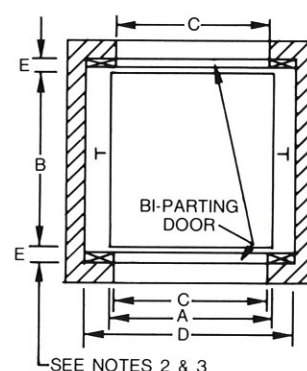
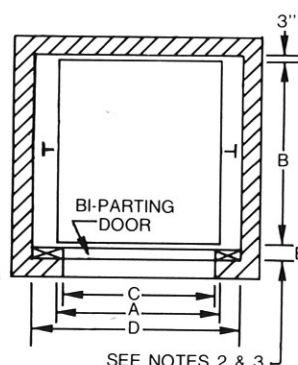
- Dimension H = 7'-0" on light & medium duty and 8'-0" (or as required) for heavy duty doors. Doors higher than 8'-0" require additional overhead height.
- For large heavy duty doors consult your Montgomery Professional.
- All data is general. Consult your local Montgomery Professional for exact information for your working drawings.
- For reactions, consult your local Montgomery Professional.



Hydraulic:

Hydraulic Freight Elevators also meet and exceed the heavy duty requirements of freight type loading. They are recommended for nominal speed and travel requirements. Features of this type elevator include minimum hoistway clearances, economical design of the hoistway and elimination of the overhead machine room. The recommended machine room location is at the lowest landing adjacent to the hoistway, but can be located in a semi-remote area from the hoistway.

For freight door information see page 7.



For further information regarding ANSI/ASME Freight Elevator Loading Classifications (Classes A, B, C-1, C-2 & C-3) consult your local Montgomery Professional.

LIGHT AND MEDIUM DUTY FREIGHT ELEVATORS

CAPACITY	2000#	3000#	4000#	5000#	6000#	8000#
A	5'-0"	5'-6"	6'-6"	8'-6"	8'-6"	8'-6"
B	6'-0"	7'-0"	8'-0"	10'-0"	12'-0"	12'-0"
C	4'-8"	5'-2"	6'-2"	8'-2"	8'-2"	8'-2"
D-manual doors	6'-4"	6'-10"	7'-10"	9'-10"	10'-0"	10'-6"
D-power doors	6'-10"	7'-4"	8'-4"	10'-4"	10'-6"	10'-6"
O-7'-0" high doors	13'-2"	13'-2"	13'-2"	13'-2"	13'-2"	13'-2"
O-8'-0" high doors	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"
P	4'-6"	4'-6"	4'-6"	4'-6"	4'-6"	5'-0"

NOTES:

- Dimensions O and P are based on car speeds up to 150 FPM.
- Dimension E = 5" for regular type counter balanced hoistway doors and 6 3/4" for pass type counter balanced hoistway doors.
- Pass type hoistway doors are required when floor heights are less than 11'-0" for 7'-0" openings and less than 14'-0" for 9'-0" openings. See chart on page 7 for other door sizes.
- Dimension F = 7'-0" on light and medium duty, 8'-0" or as required for heavy duty.
- A legal machine room meeting Code requirements and ventilated with temperature maintained between 65° and 100°F must be provided. Machine room location preferably should be at the lowest landing adjacent to the hoistway. Machine room size varies depending on capacity and speed of elevator. Consult your Montgomery Professional for the exact size.

**HEAVY DUTY
POWER TRUCK LOADING FREIGHT ELEVATORS**

CAPACITY	10,000#	12,000#	16,000#	18,000#	20,000#
A	10'-6"	10'-6"	10'-6"	10'-6"	12'-6"
B	14'-0"	14'-0"	16'-0"	16'-0"	20'-0"
C	10'-2"	10'-2"	10'-2"	10'-2"	12'-2"
D-manual doors	12'-6"	12'-6"	12'-6"	12'-6"	14'-6"
D-power doors	12'-6"	12'-6"	12'-6"	12'-6"	14'-6"
O-7'-0" high doors	13'-2"	13'-2"	13'-2"	13'-2"	13'-2"
O-8'-0" high doors	14'-2"	14'-2"	14'-2"	14'-2"	14'-2"
P	6'-0"	6'-0"	6'-0"	6'-0"	6'-0"

- Pit depths and overhead clearances are in accordance with ANSI/ASME code requirements. Local codes may vary these requirements.
- Layout and dimensions shown for freight elevators based on bi-parting counter balanced type hoistway doors.
- Consult your local Montgomery Office for more information regarding Notes 5 and 6.
- For capacities over 20,000 lbs. and for large heavy doors, consult your Montgomery Professional.
- All data is general. Consult your local Montgomery Professional for exact information for your working drawings.
- For reactions, consult your local Montgomery Professional.



montgomery®

ESCALATORS

Escalators move more people at a lower cost per passenger than any other form of vertical transportation. They may be used as the primary carrier in retail buildings, in transportation terminals and in highly populated office buildings. They can also effectively augment elevator systems, especially in high rise office buildings, permitting elevator systems to provide more effective service to other areas of the building.

EFFICIENCY: two steps on the same level at entry and exit speeds and safeguards traffic

DESIGN/ENGINEERING: heavy duty construction for long life and trouble free operation

LOW COST MAINTENANCE: attained by high quality heavy duty equipment

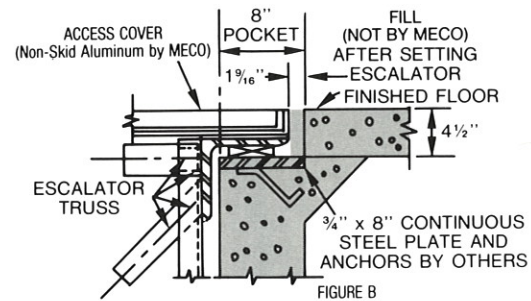
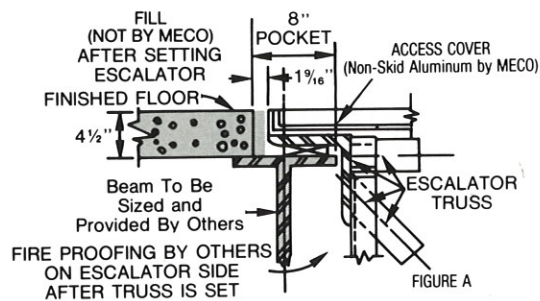
APPEARANCE: durable modern materials retain attractive appearance

SAFETY: more and better safety devices than any other escalator

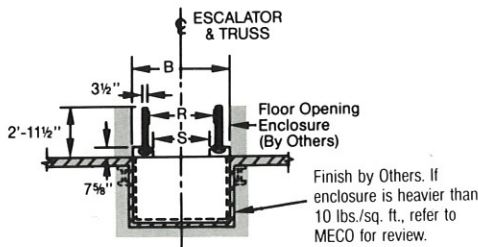
DEPENDABILITY: quickly and easily serviced...less down time

MANUFACTURE: designed and built in the **UNITED STATES**

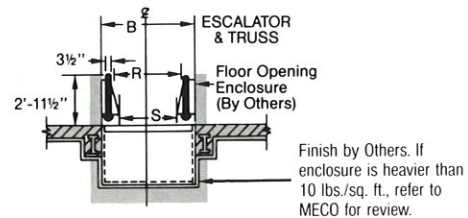
crystal 2000® Glass Balustrade & Solid Balustrade - End Support Details



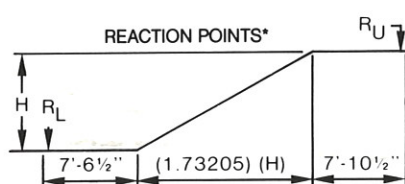
crystal 2000® Glass Balustrade - Section



Solid Balustrade - Section



ESCALATOR REACTIONS*			
3E ESCALATOR			
RL	(550)H + 10,000	RU	= (550)H + 11,100
4E ESCALATOR			
RL	(660)H + 10,570	RU	= (660)H + 11,670
5E ESCALATOR			
RL	(660)H + 11,650	RU	= (660)H + 12,750



*Reaction formulae based on:
50% dead load
25% live load
25% impact
Includes weight of 10 lbs./sq. ft. covering on sides and soffit.

Consult MECO for reactions if intermediate support is used.

WIDTH CHART						
Model No.	Capacity Persons Per Hour At		Rated Width R	Step Width S	Overall Width B	Well Width Rough Opening
	90 FPM	120 FPM				
3E	5,000	6,500	32"	24"	4'-4"	Overall Width
4E	7,000	9,000	40"	32"	5'-0"	B + 2"
5E	8,000	10,000	48"	40"	5'-8"	

LAYOUT NOTE:

The following information, when available, must be shown on all layouts for use of the balustrade manufacturer.

D - Dimension from finished floor to the finished plaster ceiling or bottom of smoke guard.

E-F - Detail and kind of wellway railings or fire shutter enclosures which are not furnished by the balustrade manufacturer.

SHADED AREAS NOT BY MECO



Escalator Standard Equipment:

STANDARD EQUIPMENT INCLUDES

complete truss fabricated of welded, hot rolled, structural steel tubes; precision worm gear drive; roller and ball bearings throughout; flange mounted motor; permanent magnet brake; portable controller,* complete electrical and mechanical safety system; reversing stations; interchangeable precision assembled steps with cleated risers; matched endless step chains; accurately aligned track system; complete balustrade including skirts; inner panels, decks and endless moving neoprene rubber handrail; floor access covers to upper and lower machinery well both within truss area.

REQUIREMENTS

1. Floor around escalator is not to be laid until escalator is installed.
2. Flooring within 8" of escalator floor access doors (top and bottom) is not to be laid until floor access doors are in place.
3. Electric conduits, sprinkler pipes or soffit lights must be installed entirely outside of truss at all points except where codes require sprinkler protection of escalator machinery. Consult Montgomery for location within truss.
4. No walls or other parts of building structure are to be carried on truss.

*CSA listed

OWNER TO PROVIDE AND INSTALL THE FOLLOWING

1. All escalator supports including bearing plates if concrete beams are used.
2. 3 phase, 60 cycle power supply and 110 volt light supply to controller.
3. Combination lamp receptacle and convenience outlet in machine room and lower reversing station.
4. The material used for the exterior is not to exceed 10 lbs./sq. ft. for the enclosure of the escalator.
5. All items marked "by others."

CONTACT ANY OF OUR SALES AND SERVICE OFFICES TO OBTAIN EXPERT PLANNING ASSISTANCE INCLUDING COMPLETE LAYOUT AND SPECIFICATIONS

MOTOR HORSEPOWER REQUIREMENTS

90 FPM SIZE FLOOR HEIGHT

10 HP	3E	5'-6" to 24'-0"
	4E	5'-6" to 17'-0"
	5E	5'-6" to 15'-0"
15 HP	3E	Over 24'-0" to 36'-0"
	4E	Over 17'-0" to 26'-0"
	5E	Over 15'-0" to 23'-0"
20 HP	3E	Over 36'-0" to 42'-0"
	4E	Over 26'-0" to 30'-0"
	5E	Over 23'-0" to 26'-0"

120 FPM

10 HP	3E	5'-6" to 19'-0"
	4E	5'-6" to 14'-0"
	5E	5'-6" to 12'-0"
15 HP	3E	Over 19'-0" to 28'-0"
	4E	Over 14'-0" to 20'-0"
	5E	Over 12'-0" to 18'-0"
20 HP	3E	Over 28'-0" to 32'-0"
	4E	Over 20'-0" to 23'-0"
	5E	Over 18'-0" to 21'-0"

120/90 FPM (2 SPEED)

10/7.5 HP	3E	5'-6" to 16'-0"
	4E	5'-6" to 12'-0"
	5E	5'-6" to 11'-0"
15/11.25 HP	3E	Over 16'-0" to 24'-0"
	4E	Over 12'-0" to 18'-0"
	5E	Over 11'-0" to 16'-0"
20/15 HP	3E	Over 24'-0" to 32'-0"
	4E	Over 18'-0" to 23'-0"
	5E	Over 16'-0" to 21'-0"

POWER DATA

90 FPM

HP	200 VOLTS		460 VOLTS		575 VOLTS	
	STARTING CURRENT IN AMPERES	RUNNING CURRENT IN AMPERES	STARTING CURRENT IN AMPERES	RUNNING CURRENT IN AMPERES	STARTING CURRENT IN AMPERES	RUNNING CURRENT IN AMPERES
10	128.25	33.12	57.75	14.4	46.2	11.5
15	213.75	50.6	93.07	22.0	74.47	17.6
20	270.75	64.4	117.75	28.0	94.2	22.4

120 FPM

HP	200 VOLTS		460 VOLTS		575 VOLTS	
	STARTING CURRENT IN AMPERES	RUNNING CURRENT IN AMPERES	STARTING CURRENT IN AMPERES	RUNNING CURRENT IN AMPERES	STARTING CURRENT IN AMPERES	RUNNING CURRENT IN AMPERES
10	130.5	29.4	56.77	12.8	45.45	10.2
15	191.25	47.4	83.1	20.6	66.45	16.5
20	264.75	60.0	114.97	26.1	91.95	20.9

120/90 FPM (2 SPEED)

HP	200 VOLTS		460 VOLTS		575 VOLTS	
	STARTING CURRENT IN AMPERES	RUNNING CURRENT IN AMPERES	STARTING CURRENT IN AMPERES	RUNNING CURRENT IN AMPERES	STARTING CURRENT IN AMPERES	RUNNING CURRENT IN AMPERES
10/7.5	135.75/105.75	30.8/25.9	69.75/62.25	14/12.9	54/47.25	11.1/10.4
15/11.25	190.5/135.75	45/37.4	95.25/65.25	20.1/16.6	72/48	16.1/13.2
20/15	331.5/186	64.5/49.7	130.5/84.75	27/21.8	102.75/70.5	21.7/17.8

ALL POWER DATA BASED ON 3 PHASE 60 HERTZ

Power Walks & Power Ramps:

provide fast, safe, high-volume horizontal, or combined horizontal and inclined (to 12 degrees) transportation of people within buildings, or outdoors. Exposition centers, stadiums, auditoriums, transportation terminals, parking lots to buildings and in or out of buildings are a few Power Walk and/or Power Ramp applications to transport people where walking is not advantageous.

STANDARD EQUIPMENT INCLUDES

complete truss fabricated of welded, hot rolled, structural steel tubes (or combination of truss and tubular stanchion); precision worm gear drive; roller and ball bearings throughout; flange mounted motor; permanent magnet brake; portable controller*; complete electrical and mechanical safety system; reversing stations; interchangeable precision assembled treadway pallets with interlocking treads on adjacent pallets; matched endless pallet chains; accurately aligned track system; complete balustrades including inner panels; decks with endless moving neoprene rubber handrail; and floor access covers to upper and lower machinery wells both within truss area.

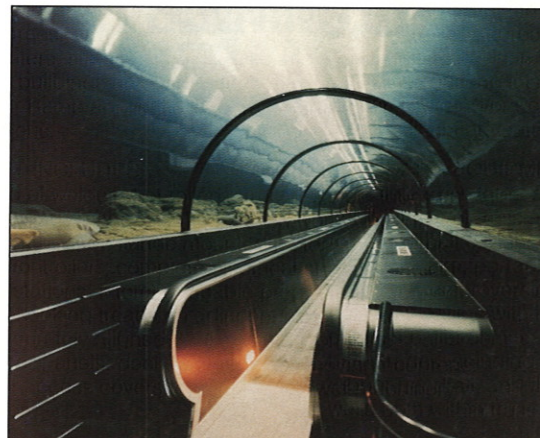
BALUSTRADE APPLICATION

for use with Power Walks and/or Power Ramps may be either solid (e.g. stainless steel, bronze, etc.) or can be glass. This alternative is available for use on either side (e.g. either device may have a solid balustrade on one side and a glass balustrade on the other...or...intermediate sections of glass versus solid in the continuous run).

CONSULT MONTGOMERY

Contact your local Montgomery Professional for application data, layout and/or specification data needed to plan a complete installation.

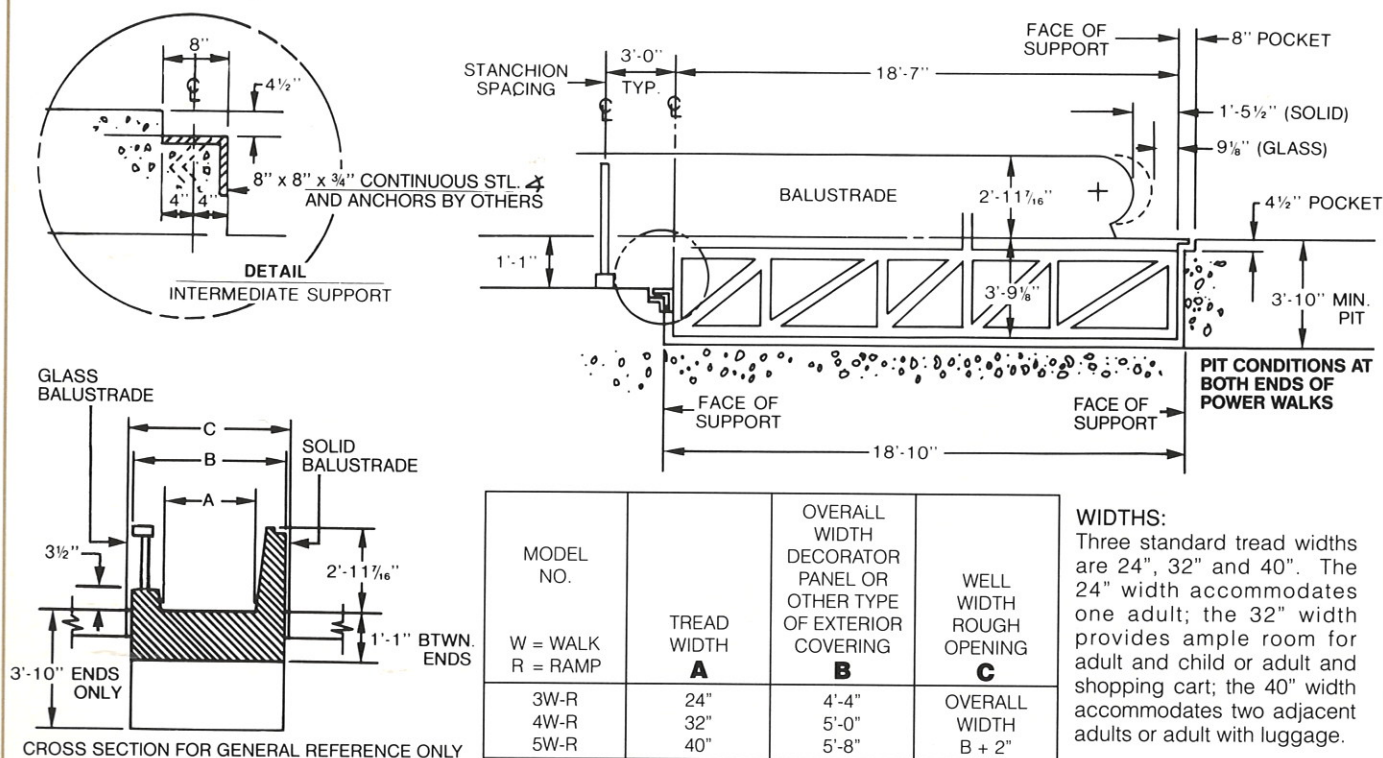
*CSA listed



Shark Encounter at Sea World
Orlando, Florida

PLANNING POWER WALKS/POWER RAMPS

Power Walk length in excess of 300 lineal feet requires special engineering evaluation. Consult your local Montgomery Professional. Any arrangement or combination of horizontal and inclines, to a maximum of 12 degrees, can be provided. Montgomery Power Walks can be designed in concert with Montgomery Power Ramps to provide transition from level to incline/decline to traverse existing elevated floors, etc. Such transition will occur within the "Face of Support" dimension shown below. The transition of elevation (incline/decline) requires a minimum of 13" in height.



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Decatur
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LaSalle
Moline (Corp. Hdqts.)
Mt. Vernon
Oak Brook
Peoria
Quincy (Wagner Elev. Serv., Inc.)
Rock Island
Rockford
Springfield
Sterling
Indiana
Fort Wayne (Early Elev. Corp.)
Indianapolis
Kokomo (Early Elev. Corp.)
Lafayette
Marion (Early Elev. Corp.)
South Bend (Early Elev. Corp.)
Terre Haute
Iowa
Burlington (Wagner Elev. Serv., Inc.)
Cedar Rapids
Clinton
Des Moines
Dubuque
Iowa City
Ottumwa (Wagner Elev. Serv., Inc.)
Sioux City (Carter Elev. Co., Inc.)
Waterloo
Kansas
Dodge City
Hays
Lawrence
Salina
Topeka
Wellington
Wichita
Kentucky
Bowling Green (Murphy Elev. Co.)
Lexington (Murphy Elev. Co.)
Louisville (Murphy Elev. Co.)
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Jackson
Meridian
Vicksburg
Missouri
Columbia
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Joplin
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Reno
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(Contact Philadelphia, PA Office)
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Binghamton (Midstate Elev. Co.)
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Ithaca (Midstate Elev. Co., Inc.)
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(Contact Westport, CT Office)
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Youngstown

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South Dakota
Aberdeen (Carter Elev. Co., Inc.)
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Richardson
San Antonio
Tyler
Waco
Utah
Ogden
Salt Lake City
Vermont
Burlington
Virginia
Danville
Richmond
Washington
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Seattle
Spokane
Tacoma
Yakima
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