



Nothing feels quite
like **freedom.**



**FREEDOM[®] TRACTION
AND HYDRAULIC
ELEVATORS
BY MCE**
PLANNING GUIDE

MCE

Motion Control Engineering[®]

A Kinetek Company[®]

Freedom® Elevators

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Freedom to Choose®



MCE pioneered an industry by giving building owners the *Freedom to Choose* elevator control equipment that is serviceable and maintainable by any qualified elevator service provider.

Today at MCE, the future is still about Freedom.

Introducing Freedom® Elevators by MCE — complete elevators that start with industry leading non-proprietary controls from MCE — and include industry standard machines, wire hoist rope, cast iron sheaves, safeties, buffers, and roller guides.

Crafted with precision in our state-of-the-art 3D design center — and constructed for reliability, performance and future serviceability, Freedom Elevators now give building owners a choice when it comes to complete elevators.

Before selecting your next elevators, be sure that any qualified elevator service provider can offer the service, parts, technical support, diagrams, manuals, and factory training that you'll have with non-proprietary, serviceable and maintainable Freedom Elevators.

Once you've made this distinction, you'll find the clear choice to be Freedom by MCE, the elevator designed to give you the *Freedom to Choose*.



Freedom® Traction Elevator Product Summary

	MRL-MB Series	MRL-MC Series	MRL-MP Series
Type	MRL	MRL	MRL
Machine	ACPM gearless	ACPM gearless	ACPM gearless
Speed	150, 200, 350, 500 FPM	150, 200, 350, 500 FPM	150, 200, 350, 500 FPM
Capacity	2100 - 5000 lbs	2100 - 3500 lbs	2100 - 5000 lbs
Max stops	32	32	32
Max openings	64	64	64
Max travel	300 feet	300 feet	300 feet
Operation	Simplex, Duplex, Group	Simplex, Duplex, Group	Simplex, Duplex, Group
Roping	2:1	2:1	2:1
Structural	Traditional machine beams in overhead machine room bearing load onto building structure.	Hoist machine cassette bears load through elevator guide rail system. Cassette slides up/down counterweight guide rails for installation and repair.	Platform mounted machine in overhead bears load through elevator guide rail system.
Control location	Remote, to 220'	Remote, to 220'	Remote, to 220'

	MR ACPM 2:1	MR ACPM 1:1	MR GEARED 1:1
Type	OHT	OHT	OHT
Machine	ACPM gearless	ACPM gearless	VVVF geared, DC geared
Speed	150, 200, 350, 500 FPM	150, 200, 350, 500 FPM	150, 200, 350, 500 FPM
Capacity	2100 - 8000 lbs	2100 - 3000 lbs	2100 - 20000 lbs
Max stops	32	32	32
Max openings	64	64	64
Max travel	300 feet	300 feet	300 feet
Operation	Simplex, Duplex, Group	Simplex, Duplex, Group	Simplex, Duplex, Group
Roping	2:1	1:1	1:1
Structural	Traditional machine beams in overhead machine room bearing load onto building structure.	Traditional machine beams in overhead machine room bearing load onto building structure.	Traditional machine beams in overhead machine room bearing load onto building structure.
Control location	In overhead machine room	In overhead machine room	In overhead machine room

*Machine type differs by duty requirements.

In addition to MCE's standard applications listed in this planning guide, custom applications are also available from MCE. Consult with your MCE Sales Representative to review your special design requirements.

The Freedom[®] Difference

Standard Package Features



Hoist ropes

Industry standard traction steel wire rope. Pre-cut to required lengths and shipped on individual spools. Available from multiple vendors for future service purposes.



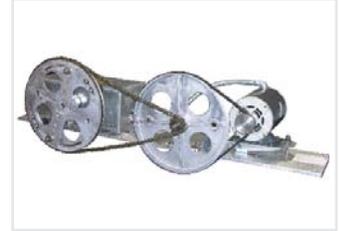
Motor cable

VFD shielded and jacketed motor wire is included with every Freedom[®] MRL elevator providing a high degree of noise immunity and reduced inductance potential.



Car sling

Heavy duty car frame constructed of structural C-channel and angles designed in conjunction with the safety plank and sheave beams.



Door operators

Industry standard high performance door operator equipment featuring encoderless VVVF closed loop technology. Components available from multiple sources.



Safeties

Industry standard Type "B" flexible guide clamp or Type "A" instantaneous safeties (depending on speed) mounted under structural steel C-channel safety plank.



Governors

Centrifugal, jaw type governor with overspeed sensing switch. Remote set/reset feature included on MRL applications with an integrated user interface built into control system.



Isolation transformers

Reduces and/or eliminates line distortion and pollution from getting back into building power distribution system. Electrically isolates motor and drive from other sensitive building equipment.



Platform construction

Heavy duty welded angle, C-channel floor joist construction with fire resistant sheet steel underside. Two layers of 3/4" high density plywood secured with flush elevator bolts. Car sill recessed to accommodate floor thickness.



Roller guides

High quality car and counterweight roller guides are standard and specifically engineered for the speed and duty of the car. Car and counterweight roller guide mounting plates with integral rail retention are also standard.



Counterweight package

Heavy duty C-channel and plate members comprise the rigid counterweight frame. Steel filler plates with retention tabs are included along with a vertical stack retention system. Counterweight safeties included with occupied space under pit.



Overhead structure

Engineered I-beams, C-channels and plate materials are used to build the traditional Freedom[®] overhead structure for OHT and MRL applications. Loads are transferred onto the building structure or through the guide rails at points designated on the MCE Shop Drawings.



Car and counterweight sheaves

Traditional cast iron compound sheaves are fastened to the sheave beam with heavy-duty pillow blocks. Large bearings are designed to exceed loads without comprising standard technology or serviceability.



Combination brackets

Counterweight rails and car king rail attach directly to the combination bracket using sliding rail clips, square headed bolts, bolt retainers and rail shims. Adjustment slots allow for placement variation on the wall and rough adjustment of the car king rail.



Traction and compound sheave guards

Continuous traction sheave and compound sheave guards provide rope retention. Installation and fine adjustment is made easy.



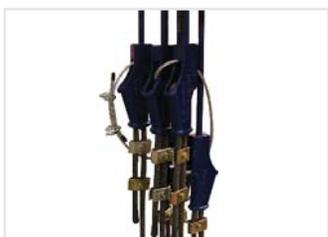
Safety plank and sheave beam

Underslung sheave beam assemblies designed to pick on center of gravity. Safety plank and sheave beams are constructed of engineered C-channel materials. All tapered flange surfaces utilize tapered washers and hardware required to comply with ASME.



Stiles and crosshead

Structural steel C-channel stiles and crosshead assemblies with gusset plates make for a rigid car frame. Roller guide mount plates/rail retention plates mount to the top of the crosshead flanges. All bolted connections meet or exceed ASME requirements.



Wedge shackles with isolation and anti-rotation

Wedge shackles are supplied with isolation kits and anti-rotation kit. Staggered shackle rod lengths prevent contact.



Cartop locking device

The crosshead mounted locking bolt mechanism engages a rail mounted plate in the overhead space on MRL applications when the cartop is used as a work platform. When engaged, power is removed from the motor and brake.



Platform isolation

Multiple durometer tested isolation pads are installed under Freedom® platforms to reduce noise and vibration in the cab. Platform compression stop bolts also serve as jack bolts for replacing isolation pads in the future.



Rail brackets

Freedom® rail brackets allow for multi-axis adjustment to compensate for hoistway wall variations. All ASME compliant hardware is included with rail brackets. Hoistway wall mounting hardware is provided by others.



Adjustable pit channels

Freedom® car and counterweight reinforced continuous pit channels allow installers to precisely position the starting guide rails while compensating for hoistway construction variations.



Counterweight vertical retention

Counterweight filler plates are cut to limiting tolerances. Adjustable vertical retention angles allow the installer to easily adjust the balanced weight during construction. Through bolts are installed to restrict the stack from upward movement. Jack bolts apply pressure to the filler plates.



Buffers

Depending on the speed, MCE provides spring or hydraulic car and counterweight buffers. Low profile oil buffers are nitrogen gas charged/oil compression.



Car and counterweight rail retention plates

Plates notched to encompass the blade of the car and counterweight guide rails ensure car and counterweight frames are held captive within the guide rail system. Roller guides are mounted to retention plates.

Freedom® Elevator Standard Features

Freedom Elevators are crafted with CNC precision by skilled US labor and meet AWS certified welding standards. The non-proprietary electrical and mechanical design of Freedom Elevators allows for full future service options and ensure the building owner an elevator design with future flexibility. Only industry standard parts and materials are used in the construction of Freedom Elevators. Replacement parts are available to any qualified elevator service provider.

Service and Documentation

Technical Support	Available to any qualified elevator service provider. Dedicated construction and control installation support for the original installer at no extra charge.
Project Management	A Freedom Elevator project manager will work with elevator company staff from order entry through job turn-over.
Replacement Parts	Every replacement part is available to all at published prices.
Spare Parts	Every component of the elevator can be specified as a spare part by the specifier without special agreements. This includes the hoist machine, control boards, software copies, drive, ropes and door operators.
Technical Training	Comprehensive factory training classes covering elevator start-up, maintenance and troubleshooting are available to all qualified elevator service personnel. Courses consist of classroom, lab and test tower exercises.
Warranty	15-month standard warranty.
Manuals	Control, construction and peripheral manuals are available to all.
Drawings	Control and mechanical construction drawings are available to all.

Structural

Structural Design	Freedom Elevators use engineered structural components that are designed for ease of installation and will stand the test of time. The MB Series MRL bears the loads onto the building structure in the overhead. The MP Series MRL transfers loads through the guide rail system to the pit. The MC Series MRL utilizes a unique cassette design and bears the loads through the guide rail system. Conventional machine room traction ACPM 2:1 and geared traction options are also available from MCE.
Sling	Heavy duty structural steel car frame is designed to remain plumb and square.
Platform	Platforms feature two layers of 3/4" high density plywood supported by channel style joists framed with heavy duty welded angle.
Safety Plank	Structural channels exceed safety set load requirements and are integrally designed with the stiles to ensure strong mechanical connections.
Sheave Beam	Sheaves are mounted using pillow blocks to structural channels spanning under the safety plank or in crosshead configurations for 2:1 applications.
Counterweight	Heavy duty counterweight frame is comprised of engineered structural steel members that exceed code requirements. Precision cut steel filler plates are notched into C-channel stiles and secured in place.
Guide Rails and Brackets	Machined guide rails comply with ISO 7465 - 1997 specifications. Seismic considerations evaluated by project. Bracket designs and multiple shim thicknesses supplied allow for a high degree of adjustability to overcome building hoistway inconsistencies and provide for precision installation tolerances.
Roller Guides	High quality ELSCO car and counterweight roller guides provide industry respected ride quality and longevity.

Motion Control

Control	Freedom features non-proprietary serviceable/maintainable VVVF elevator control systems which utilize a built-in user interface and on-board diagnostics which allow the building owner the Freedom to Choose™ maintenance providers. Technical support, software revisions, electrical diagrams and replacement hardware are available to everyone at published prices.
Hoist Machine	Gearless AC permanent magnet machines meet NEMA design standards and are a non-proprietary mechanical design. MCE's Freedom machines utilize industry standard wire rope. This eliminates the physical limitations inherent in some original equipment manufactured by non-NEMA standard machine designs. Physical, electrical and feedback characteristics of Freedom Elevator hoist machines are available to all.
Brake	Dual, independently controlled brake assembly is easily inspected and serviceable. Redundant brakes, each capable of handling 125% of the rated load.
Encoder	EnDat digital velocity encoder provides 8192 pulses per revolution (PPR) offering precision rotational feedback.
Landing System	Position system offers absolute position and distance feedback.
Isolation Transformer	Utilized on line voltages other than 480 VAC or when specified. Eliminates line distortion and pollution going back into the building power distribution system. Electrically isolates motor and drive from other sensitive equipment in the building.
Remote Control Location	Controls can be remotely located up to 220 wire/cable feet from the hoist machine location.
Motor Cable	Shielded and jacketed VFD motor cable is provided by MCE for all ACPM Freedom applications.

Suspension System

Traction Drive Sheave	Sheave grooves are designed to provide traction using small diameter ropes and code compliant sheaves. Rope retention guard allows for adjustment to minimum clearance to the crown of the ropes which reduces the risk of the rope being dislodged from a sheave groove.
Suspension Ropes	Traditional time-tested wire rope available from multiple sources eliminates the need to call the original equipment manufacturer for future rope replacements and allows for a competitive bid situation.
Compound Sheaves	Gray cast iron sheaves meet designed hardness and metallurgical composition to ensure long rope life. Heavy duty bearings exceed load rating requirements which provides a long service life. Adjustable rope guards allow for minimum clearance to crown of ropes which reduces the risk of the rope being dislodged from a sheave groove.
Rope Shackles	Neoprene washer isolated rope shackles are staggered and provide rope tension adjustment.

Safety

Governor	MRL applications utilize remotely set/reset governors. Machine room applications utilize traditional manually reset governors. Both are centrifugal style jaw type.
Safeties	Time-tested industry standard instantaneous Type A safeties are used for speeds up to 150 fpm while Flexible Guide Clamp Type B safeties are used on speeds in excess of 150 fpm.
Buffers	Spring style buffers are used for the car and counterweight for speeds of 200 fpm or less. Hydraulic/nitrogen gas charged buffers are used for speeds in excess of 200 fpm and feature a buffer compression switch.
Ascending/Unintended Movement Protection	Means to prevent ascending car or react to unintended movement is addressed through the use of a dual independently controlled brake system, each capable of handling 125% of the rated capacity for MRL or OHT traction applications using ACPM machines. A rope brake is utilized on geared applications.

Finishes

Door Equipment	Digital closed loop door control monitors and adjusts speed and performance profiles.
Entrances	7' - 0" high entrances, UL listed jambs and door panels as required, aluminum sills, stainless steel #4 jamb and door panels, adhesive backed jamb Braille, 1/2" solid bar stock door tops, welded internal ribs with solid door backs.
Cab Shell	8' - 0" cab height, 14 gauge steel shell, jetcoat with sound deadening exterior, aluminum sill.
Wall Panels	Removable 3/4" vertical raised panels, fire rated particle board, faced and edge banded with a non-premium plastic laminate from MCE's pre-selected Wilsonart® plastic laminate selections.
Base and Reveals	Stainless steel #4.
Handrail	1 1/2" tubular handrail with stainless steel #4 finish located on rear wall for front opening applications and side walls for front and rear applications.
Cab Front	Fixed stainless steel #4 returns, columns and transom.
Canopy	12 gauge rolled shell, primer gray exterior, powder coated reflective white, escape hatch flush with canopy, mechanical lock and electric switch.
Ceiling	14 gauge drop ceiling, stainless steel #4 tee bar frame with florescent lights over polygal diffuser.
Car Fixtures	Main car operating panel with hinged stainless steel #4 faceplate, round plastic buttons, digital car position indicator, car lantern, code required items and engraving.
Hall Fixtures	Hall stations with stainless steel #4 finish, round plastic buttons, code required features and engraving.

Options

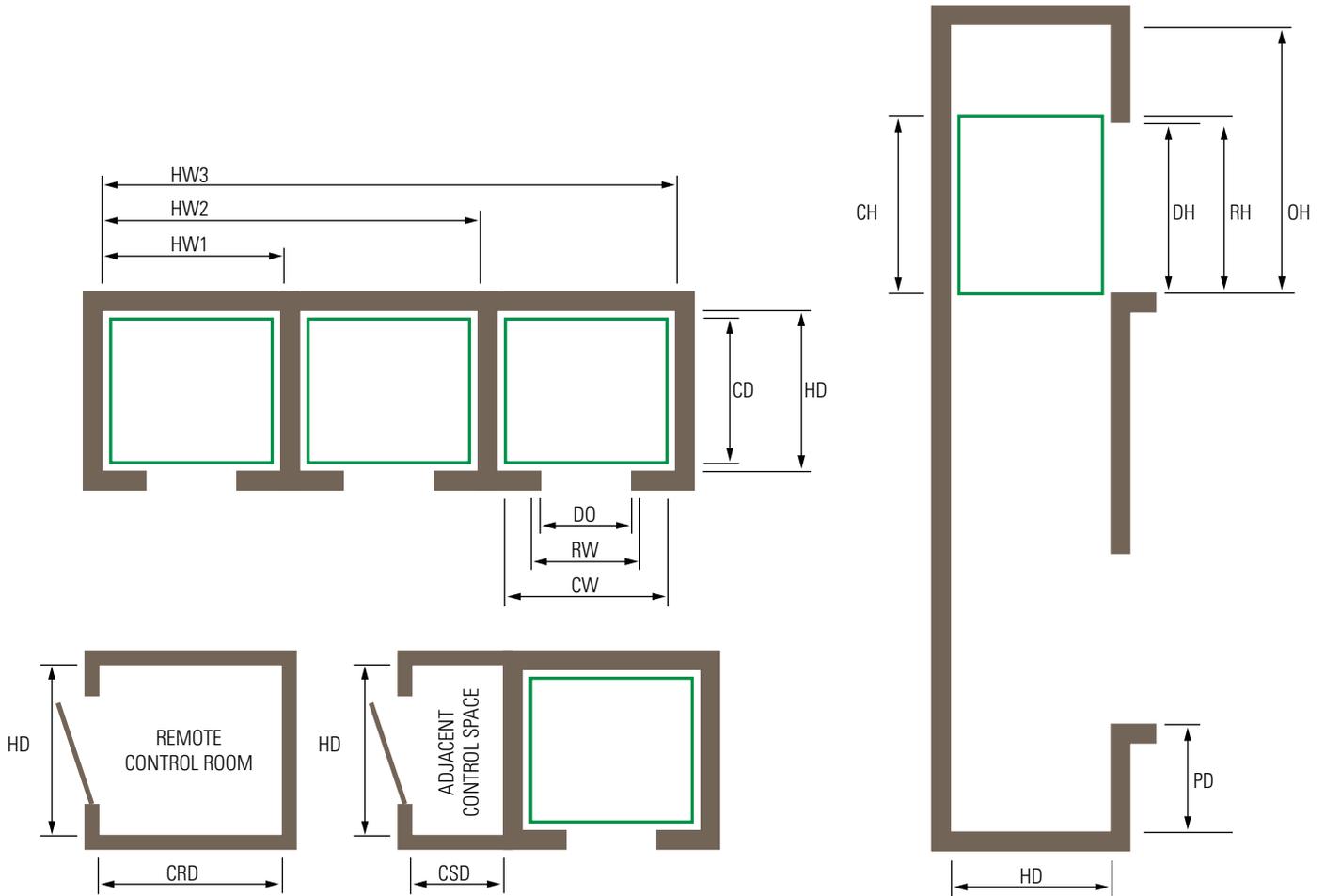
Elevator Design	MRL, Overhead Traction ACPM 2:1 or Overhead Traction Geared.
Control	Regenerative drives, IEEE 519 filters, isolation transformers, monitoring.
Entrances	8' - 0" as well as custom sized UL labeled entrances.
Cab Interiors	Custom cab interiors as required as well as special cab heights.
Platform	Marine grade plywood.
Fixtures	Swing returns, auxiliary COP, custom button selections, digital hall PI's.
Cab Interiors	Custom cab interiors as required.
Warranty	Extended product warranties available.
Manuals and Prints	Additional copies as specified.

Maximum travel: 300 ft.

Maximum stops: 32

Speed (ft/min.): 150, 200, 350 and 500 fpm

For additional assistance, please contact MCE at 800.444.7442 x545 or elevators@mceinc.com.



In addition to MCE's standard applications listed in this planning guide, custom applications are also available from MCE. Consult with your MCE Sales Representative to review your special design requirements.

		Passenger								
Capacity		2100	2500	3000	3500	4000	H4000	H4500	H5000	H5000 AIA
Passenger capacity ²		13/12	16/15	20/18	23/21	27/25	27/25	30/28	33/31	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁵		N	76"	76"	84"	84"	84"	84"	84"	84"
Door types ⁵		1SPSS	1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car ³										
CW	Interior width	5' - 8"	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	6' - 0"	5' - 9"
CD	Interior depth	4' - 6"	4' - 4"	5' - 0"	5' - 8"	5' - 6"	7' - 5"	8' - 1"	8' - 6"	9' - 0"
	Square footage	25.5	29.3	33.8	38.3	42.6	42.6	46.5	51.0	51.8
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")								
DO	Car door width	3' - 0"	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 0"
Hoistway										
HW1	Single hoistway ¹	8' - 9"	9' - 10"	9' - 10"	9' - 10"	10' - 10"	8' - 10"	8' - 10"	9' - 1"	8' - 10"
	In seismic zones ¹	8' - 11"	10' - 0"	10' - 0"	10' - 0"	11' - 0"	9' - 0"	9' - 0"	9' - 3"	9' - 0"
HW2	Double hoistway ¹	17' - 10"	20' - 0"	20' - 0"	20' - 0"	22' - 0"	18' - 0"	18' - 0"	18' - 6"	18' - 0"
	In seismic zones ¹	18' - 2"	20' - 4"	20' - 4"	20' - 4"	22' - 4"	18' - 4"	18' - 4"	18' - 10"	18' - 4"
HW3	Triple hoistway ¹	26' - 11"	30' - 2"	30' - 2"	30' - 2"	33' - 2"	27' - 2"	27' - 2"	27' - 11"	27' - 2"
	In seismic zones ¹	27' - 5"	30' - 8"	30' - 8"	30' - 8"	33' - 8"	27' - 8"	27' - 8"	28' - 5"	27' - 8"
HD	Hoistway depth	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"	7' - 10"	9' - 5"	9' - 11"	10' - 6"	11' - 0"
	In seismic zones	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"	7' - 10"	9' - 5"	9' - 11"	10' - 6"	11' - 0"
RW	Rough opening width (minimum)	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"	4' - 6"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	16' - 4"	16' - 4"	16' - 4"	16' - 4"	17' - 0"	17' - 0"	17' - 0"	17' - 0"	17' - 0"
	@ 200 fpm ⁴	16' - 7"	16' - 7"	16' - 7"	16' - 7"	17' - 3"	17' - 3"	17' - 3"	17' - 3"	17' - 3"
	@ 350 fpm ⁴	17' - 1"	17' - 1"	17' - 1"	17' - 1"	17' - 9"	17' - 9"	17' - 9"	17' - 9"	17' - 9"
	@ 500 fpm ⁴	18' - 1"	18' - 1"	18' - 1"	18' - 1"	18' - 9"	18' - 9"	18' - 9"	18' - 9"	18' - 9"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Control Closet/Room										
CSD	Control space - single car	HD x 2' - 10" (minimum)								
CRD	Control room - single car	HD x 5' - 0" (minimum)								
CRD	Control room - double car	HD x 7' - 0" (minimum)								
CRD	Control room - triple car	HD x 9' - 0" or W x D								

¹For elevators with occupied space below the elevator pit, this dimension will change. Please contact MCE to confirm these dimensions.

²Capacity requirements: US & Canada (see A17.1/B44, Appendix D).

³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 17' - 1" = 18' - 1". All overhead heights are clear under anything in the overhead structure.

⁵Gurney compliance on passenger cars up to 3500 lbs. capacity must be side slide doors.

Dimensions listed above for multiple hoistways are based on the use of 4" divider beams. If wider divider beams are utilized, a wider clear hoistway will be required.

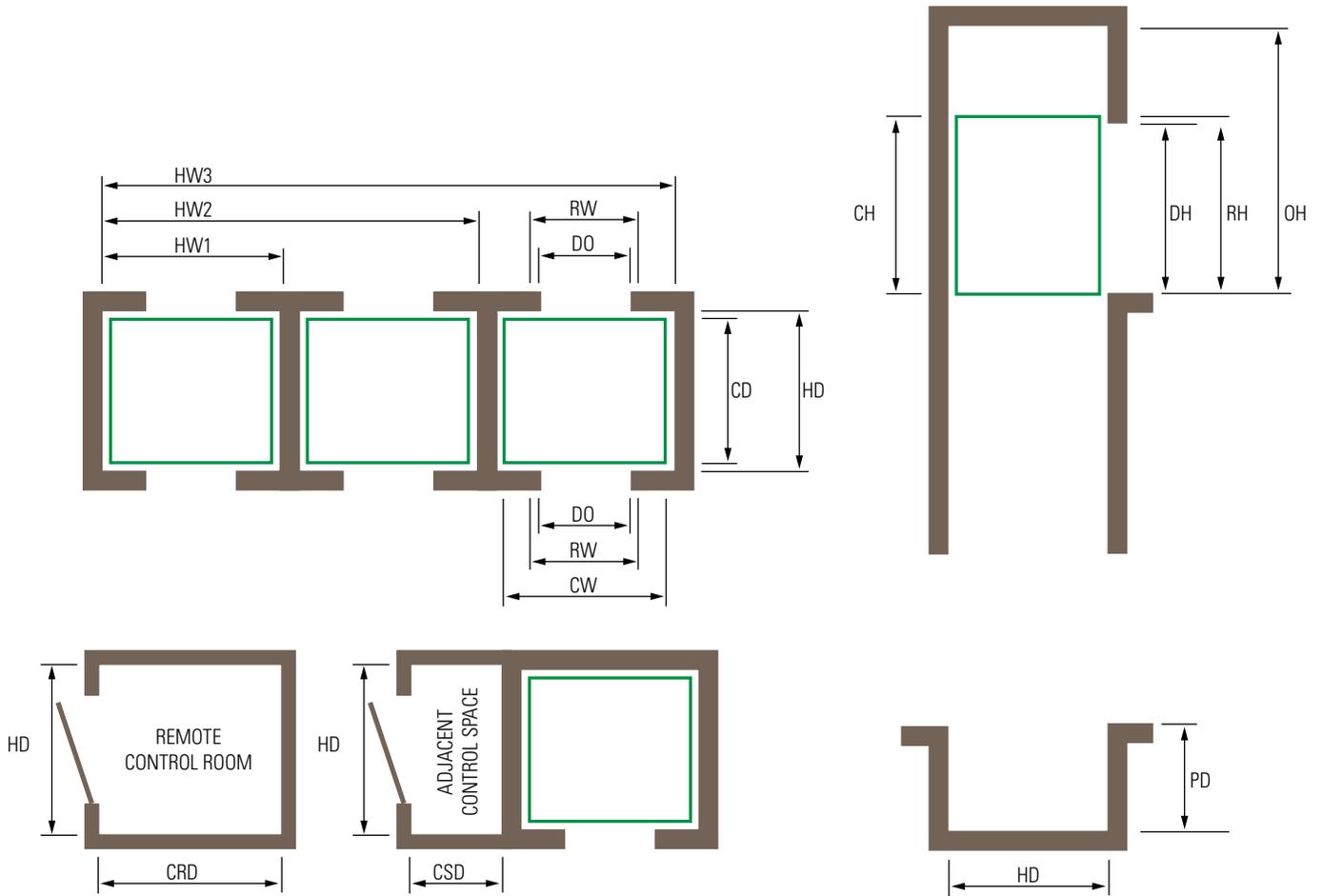
Reduced Overhead Option - Alternate methods for reducing overhead are now available depending on the application. Please contact your sales professional via one of the methods listed on this catalog for options.

Maximum travel: 300 ft.

Maximum stops: 32

Speed (ft./min.): 150, 200, 350 and 500 fpm

For additional assistance, please contact MCE at 800.444.7442 x545 or elevators@mceinc.com.



In addition to MCE's standard applications listed in this planning guide, custom applications are also available from MCE. Consult with your MCE Sales Representative to review your special design requirements.

		Passenger							
Capacity		2500	3000	3500	4000	H4000	H4500	H5000	H5000 AIA
Passenger capacity ²		16/15	20/18	23/21	27/25	27/25	30/28	33/31	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁵		76"	76"	84"	84"	84"	84"	84"	84"
Door types ⁵		1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car ³									
CW	Interior width	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	6' - 0"	5' - 9"
CD	Interior depth	4' - 4"	5' - 0"	5' - 8"	5' - 6"	7' - 5"	8' - 1"	8' - 6"	9' - 0"
	Square footage	29.3	33.8	38.3	42.6	42.6	46.5	51.0	51.8
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")							
DO	Car door width	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 0"
Hoistway									
HW1	Single hoistway ¹	9' - 10"	9' - 10"	9' - 10"	10' - 10"	8' - 10"	8' - 10"	9' - 1"	8' - 10"
	In seismic zones ¹	10' - 0"	10' - 0"	10' - 0"	11' - 0"	9' - 0"	9' - 0"	9' - 3"	9' - 0"
HW2	Double hoistway ¹	20' - 0"	20' - 0"	20' - 0"	22' - 0"	18' - 0"	18' - 0"	18' - 6"	18' - 0"
	In seismic zones ¹	20' - 4"	20' - 4"	20' - 4"	22' - 4"	18' - 4"	18' - 4"	18' - 10"	18' - 4"
HW3	Triple hoistway ¹	30' - 2"	30' - 2"	30' - 2"	33' - 2"	27' - 2"	27' - 2"	27' - 11"	27' - 2"
	In seismic zones ¹	30' - 8"	30' - 8"	30' - 8"	33' - 8"	27' - 8"	27' - 8"	28' - 5"	27' - 8"
HD	Hoistway depth	6' - 8"	7' - 4"	8' - 0"	8' - 4"	10' - 3"	10' - 11"	11' - 4"	11' - 10"
	In seismic zones	6' - 8"	7' - 4"	8' - 0"	8' - 4"	10' - 3"	10' - 11"	11' - 4"	11' - 10"
RW	Rough opening width (minimum)	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"	4' - 6"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	16' - 4"	16' - 4"	17' - 0"	17' - 0"	17' - 0"	17' - 0"	17' - 0"	17' - 0"
	@ 200 fpm ⁴	16' - 7"	16' - 7"	17' - 3"	17' - 3"	17' - 3"	17' - 3"	17' - 3"	17' - 3"
	@ 350 fpm ⁴	17' - 1"	17' - 1"	17' - 9"	17' - 9"	17' - 9"	17' - 9"	17' - 9"	17' - 9"
	@ 500 fpm ⁴	18' - 1"	18' - 1"	18' - 9"	18' - 9"	18' - 9"	18' - 9"	18' - 9"	18' - 9"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Control Closet/Room									
CSD	Control space - single car	HD x 2' - 10" (minimum)							
CRD	Control room - single car	HD x 5' - 0" (minimum)							
CRD	Control room - double car	HD x 7' - 0" (minimum)							
CRD	Control room - triple car	HD x 9' - 0" or W x D							

¹For elevators with occupied space below the elevator pit, this dimension will change. Please contact MCE to confirm these dimensions.

²Capacity requirements: US & Canada (see A17.1/B44, Appendix D).

³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 17' - 1" = 18' - 1". All overhead heights are clear under anything in the overhead structure.

⁵Gurney compliance on passenger cars up to 3500 lbs. capacity must be side slide doors.

Dimensions listed above for multiple hoistways are based on the use of 4" divider beams. If wider divider beams are utilized, a wider clear hoistway will be required.

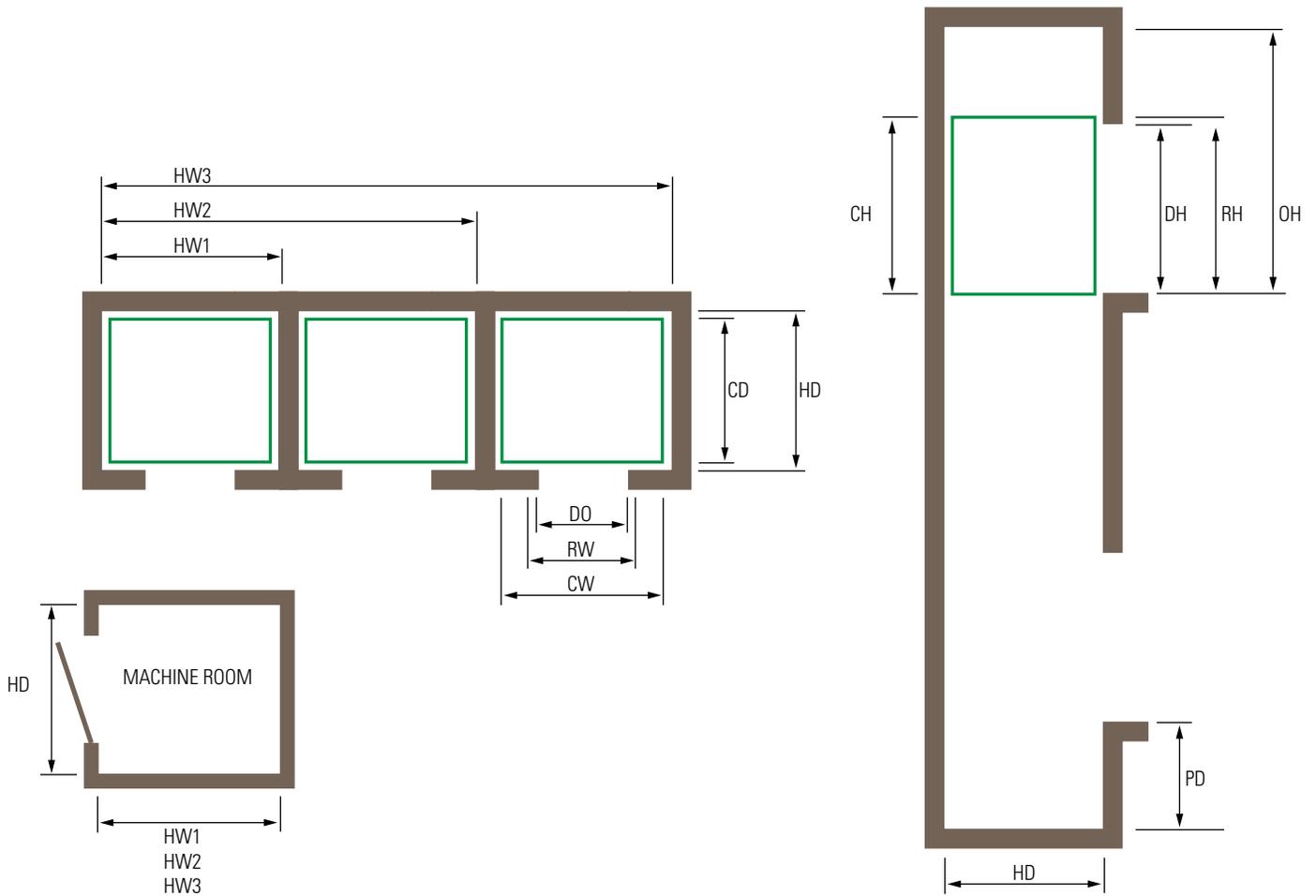
Reduced Overhead Option - Alternate methods for reducing overhead are now available depending on the application. Please contact your sales professional via one of the methods listed on this catalog for options.

Maximum travel: 300 ft.

Maximum stops: 32

Speed (ft/min.): 150, 200, 350 and 500 fpm

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		Passenger								
Capacity		2100	2500	3000	3500	4000	H4000	H4500	H5000	H5000 AIA
Passenger capacity ²		13/12	16/15	20/18	23/21	27/25	27/25	30/28	33/31	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁵		N	76"	76"	84"	84"	84"	84"	84"	84"
Door types ⁵		1SPSS	1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car³										
CW	Interior width	5' - 8 1/2"	6' - 8 1/2"	6' - 8 1/2"	6' - 8 1/2"	7' - 8 1/2"	5' - 9"	5' - 9"	6' - 0"	5' - 9"
CD	Interior depth	4' - 3 3/4"	4' - 4"	5' - 0"	5' - 5 1/4"	5' - 5 1/4"	7' - 5"	8' - 1"	8' - 6"	9' - 0"
	Square footage	24.6	29.3	33.5	36.5	41.3	42.7	46.5	51.0	51.8
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")								
DO	Car door width	3' - 0"	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 0"
Hoistway										
HW1	Single hoistway	7' - 6"	8' - 6"	8' - 6"	8' - 6"	9' - 6"	7' - 7"	7' - 7"	7' - 10"	7' - 7"
	In seismic zones	7' - 8"	8' - 8"	8' - 8"	8' - 8"	9' - 8"	7' - 9"	7' - 9"	8' - 0"	7' - 9"
HW2	Double hoistway	15' - 4"	17' - 4"	17' - 4"	17' - 4"	19' - 4"	15' - 6"	15' - 6"	16' - 0"	15' - 6"
	In seismic zones	15' - 8"	17' - 8"	17' - 8"	17' - 8"	19' - 8"	15' - 10"	15' - 10"	16' - 4"	15' - 10"
HW3	Triple hoistway	23' - 2"	26' - 2"	26' - 2"	26' - 2"	29' - 2"	23' - 5"	23' - 5"	24' - 2"	23' - 5"
	In seismic zones	23' - 8"	26' - 8"	26' - 8"	26' - 8"	29' - 8"	23' - 11"	23' - 11"	24' - 8"	23' - 11"
HD	Hoistway depth ¹	6' - 11"	6' - 11"	7' - 5"	8' - 1"	8' - 1"	10' - 2"	10' - 10"	11' - 3"	11' - 9"
	In seismic zones ¹	6' - 11"	6' - 11"	7' - 5"	8' - 1"	8' - 1"	10' - 2"	10' - 10"	11' - 3"	11' - 9"
RW	Rough opening width (minimum)	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"	4' - 0"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	16' - 4"	16' - 4"	16' - 4"	16' - 4"	17' - 0"	17' - 0"	17' - 0"	17' - 0"	17' - 0"
	@ 200 fpm ⁴	16' - 7"	16' - 7"	16' - 7"	16' - 7"	17' - 3"	17' - 3"	17' - 3"	17' - 3"	17' - 3"
	@ 350 fpm ⁴	17' - 1"	17' - 1"	17' - 1"	17' - 1"	17' - 9"	17' - 9"	17' - 9"	17' - 9"	17' - 9"
	@ 500 fpm ⁴	18' - 1"	18' - 1"	18' - 1"	18' - 1"	18' - 9"	18' - 9"	18' - 9"	18' - 9"	18' - 9"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Control Closet/Room										
CSD	Control space - single car	HD x 2' - 10" (minimum)								
CRD	Control room - single car	HD x 5' - 0" (minimum)								
CRD	Control room - double car	HD x 7' - 0" (minimum)								
CRD	Control room - triple car	HD x 9' - 0" or W x D								

¹For elevators with occupied space below the elevator pit, this dimension will change. Please contact MCE to confirm these dimensions.

²Capacity requirements: US & Canada (see A17.1/B44, Appendix D).

³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 17' - 1" = 18' - 1". All overhead heights are clear under anything in the overhead structure.

⁵Gurney compliance on passenger cars up to 3500 lbs. capacity must be side slide doors.

Dimensions listed above for multiple hoistways are based on the use of 4" divider beams. If wider divider beams are utilized, a wider clear hoistway will be required.

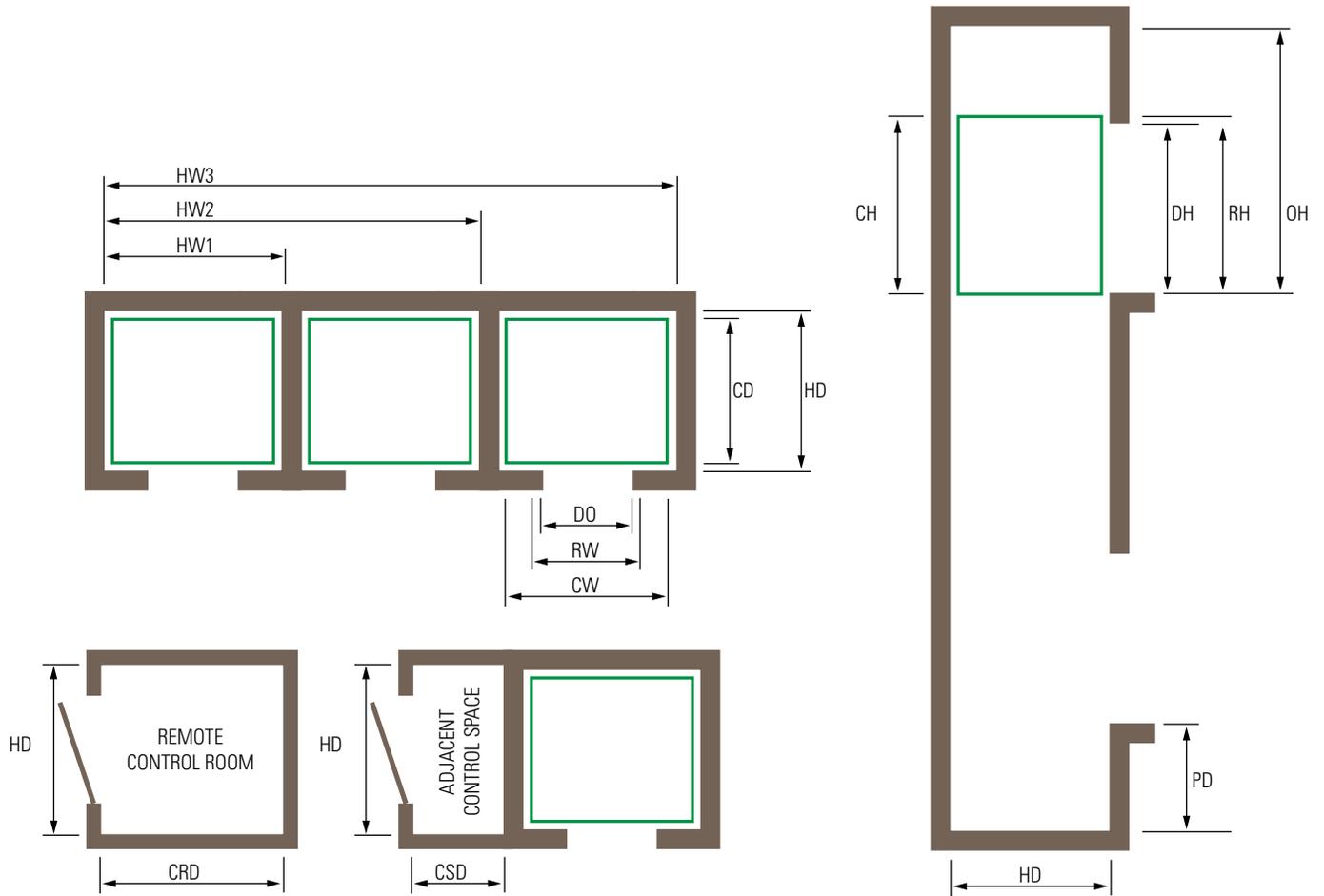
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Maximum travel: 300 ft.

Maximum stops: 32

Speed (ft/min.): 150, 200 and 350 fpm

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		Passenger			
		2100	2500	3000	3500
Capacity		13/12	16/15	20/18	23/21
Passenger capacity ²		N	76"	76"	84"
Gurney compliance (24" x 76" or 24" x 84") ⁵		1SPSS	1SPSS CO	1SPSS CO	1SPSS CO
Door types ⁵					
Car ³					
CW	Interior width	5' - 8"	6' - 8 1/2"	6' - 8 1/2"	6' - 8 1/2"
CD	Interior depth	4' - 3"	4' - 3 1/4"	4' - 9 1/4"	5' - 6"
	Square footage	24.1	28.7	32.5	36.9
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")			
DO	Car door width	3' - 0"	3' - 6"	3' - 6"	3' - 6"
Hoistway					
HW1	Single hoistway ¹	8' - 9"	9' - 10"	9' - 10"	9' - 10"
	In seismic zones ¹	8' - 11"	10' - 0"	10' - 0"	10' - 0"
HW2	Double hoistway ¹	17' - 10"	20' - 0"	20' - 0"	20' - 0"
	In seismic zones ¹	18' - 2"	20' - 4"	20' - 4"	20' - 4"
HW3	Triple hoistway ¹	26' - 11"	30' - 2"	30' - 2"	30' - 2"
	In seismic zones ¹	27' - 5"	30' - 8"	30' - 8"	30' - 8"
HD	Hoistway depth	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"
	In seismic zones	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"
RW	Rough opening width (minimum)	3' - 6"	4' - 0"	4' - 0"	4' - 0"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	14' - 6"	14' - 6"	14' - 6"	14' - 6"
	@ 200 fpm ⁴	14' - 6"	14' - 6"	14' - 6"	14' - 6"
	@ 350 fpm ⁴	14' - 6"	14' - 6"	14' - 6"	14' - 6"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"
Control Closet/Room					
CSD	Control space - single car	HD x 2' - 10" (minimum)			
CRD	Control room - single car	HD x 5' - 0" (minimum)			
CRD	Control room - double car	HD x 7' - 0" (minimum)			
CRD	Control room - triple car	HD x 9' - 0" or W x D			

¹For elevators with occupied space below the elevator pit, this dimension will change. Please contact MCE to confirm these dimensions.

²Capacity requirements: US & Canada (see A17.1/B44, Appendix D).

³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 14' - 6" = 15' - 6". All overhead heights are clear under anything in the overhead structure.

⁵Gurney compliance on passenger cars up to 3500 lbs. capacity must be side slide doors.

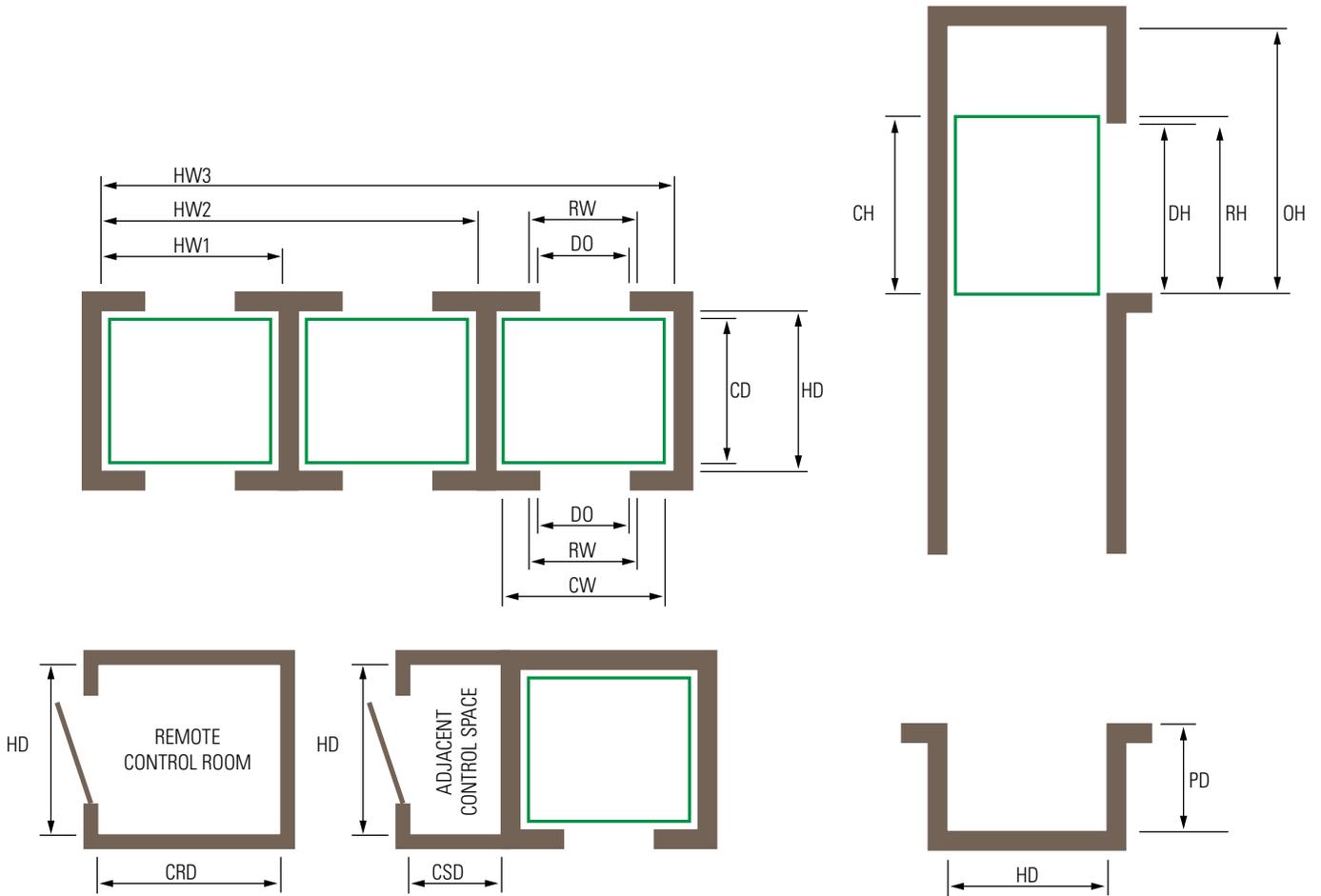
Dimensions listed above for multiple hoistways are based on the use of 4" divider beams. If wider divider beams are utilized, a wider clear hoistway will be required.

Maximum travel: 300 ft.

Maximum stops: 32

Speed (ft/min.): 150, 200 and 350 fpm

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		Passenger	
Capacity		2500	3000
Passenger capacity ²		16/15	20/18
Gurney compliance (24" x 76" or 24" x 84") ⁵		76"	76"
Door types ⁵		1SPSS CO	1SPSS CO
Car³			
CW	Interior width	6' - 8 1/2"	6' - 8 1/2"
CD	Interior depth	4' - 3 1/4"	4' - 9 1/4"
	Square footage	28.7	32.5
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")	
DO	Car door width	3' - 6"	3' - 6"
Hoistway			
HW1	Single hoistway ¹	9' - 10"	9' - 10"
	In seismic zones ¹	10' - 0"	10' - 0"
HW2	Double hoistway ¹	20' - 0"	20' - 0"
	In seismic zones ¹	20' - 4"	20' - 4"
HW3	Triple hoistway ¹	30' - 2"	30' - 2"
	In seismic zones ¹	30' - 8"	30' - 8"
HD	Hoistway depth	6' - 7 1/2"	7' - 1 1/2"
	In seismic zones	6' - 7 1/2"	7' - 1 1/2"
RW	Rough opening width (minimum)	4' - 0"	4' - 0"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	14' - 6"	14' - 6"
	@ 200 fpm ⁴	14' - 6"	14' - 6"
	@ 350 fpm ⁴	14' - 6"	14' - 6"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"
Control Closet/Room			
CSD	Control space - single car	HD x 2' - 10" (minimum)	
CRD	Control room - single car	HD x 5' - 0" (minimum)	
CRD	Control room - double car	HD x 7' - 0" (minimum)	
CRD	Control room - triple car	HD x 9' - 0" or W x D	

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³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 14' - 6" = 15' - 6". All overhead heights are clear under anything in the overhead structure.

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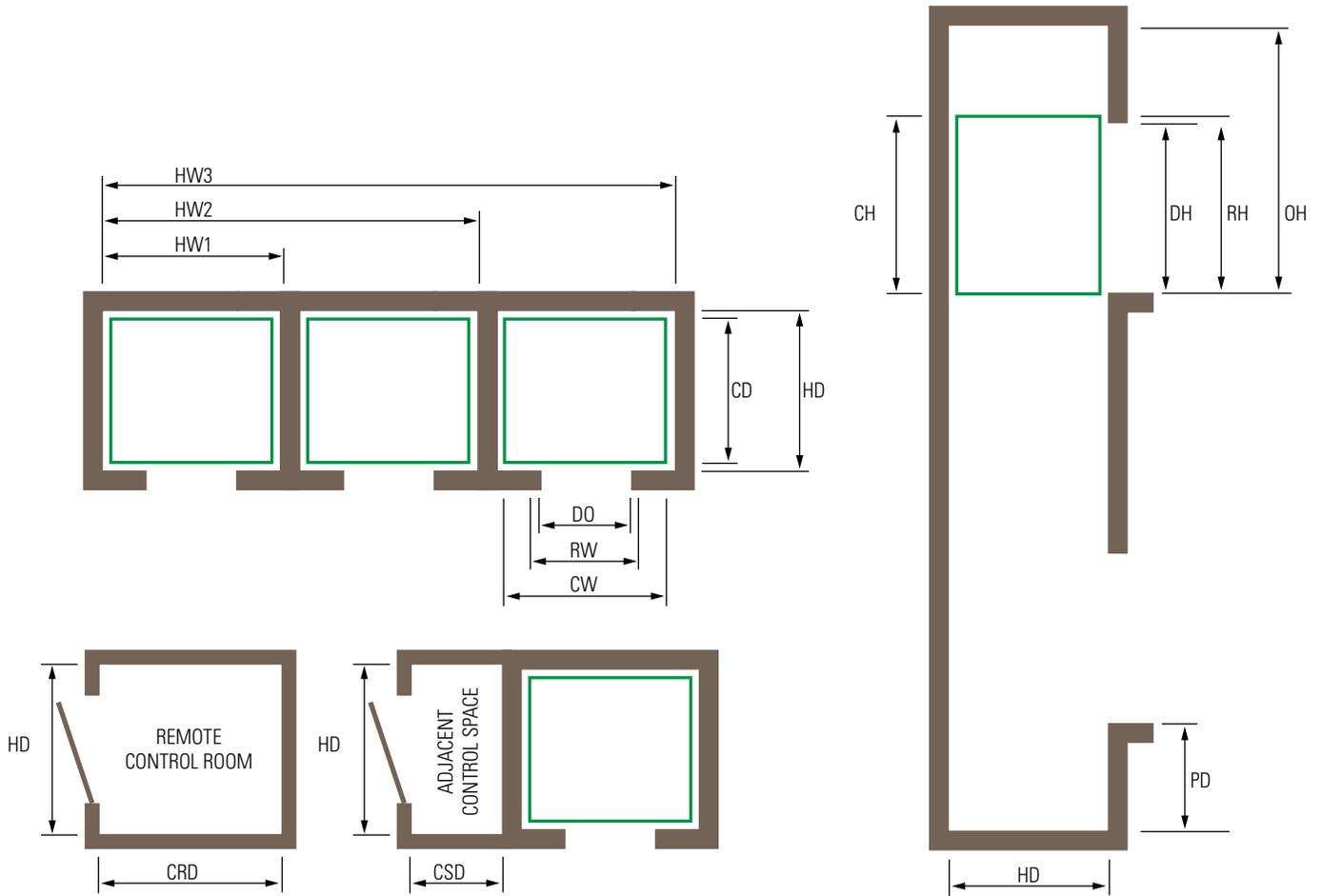
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Maximum stops: 32

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		Passenger								
Capacity		2100	2500	3000	3500	4000	H4000	H4500	H5000	H5000 AIA
Passenger capacity ²		13/12	16/15	20/18	23/21	27/25	27/25	30/28	33/31	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁵		N	76"	76"	84"	84"	84"	84"	84"	84"
Door types ⁵		1SPSS	1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car ³										
CW	Interior width	5' - 8"	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	6' - 0"	5' - 9"
CD	Interior depth	4' - 6"	4' - 4"	5' - 0"	5' - 8"	5' - 6"	7' - 5"	8' - 1"	8' - 6"	9' - 0"
	Square footage	25.5	29.3	33.8	38.3	42.6	42.7	46.5	51.0	51.8
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")								
DO	Car door width	3' - 0"	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 0"
Hoistway										
HW1	Single hoistway ¹	8' - 11"	10' - 0"	10' - 0"	10' - 0"	11' - 0"	9' - 0"	9' - 0"	9' - 3"	9' - 0"
	In seismic zones ¹	9' - 1"	10' - 2"	10' - 2"	10' - 2"	11' - 2"	9' - 2"	9' - 2"	9' - 5"	9' - 2"
HW2	Double hoistway ¹	18' - 2"	20' - 4"	20' - 4"	20' - 4"	22' - 4"	18' - 4"	18' - 4"	18' - 10"	18' - 4"
	In seismic zones ¹	18' - 6"	20' - 8"	20' - 8"	20' - 8"	22' - 8"	18' - 8"	18' - 8"	19' - 2"	18' - 8"
HW3	Triple hoistway ¹	27' - 5"	30' - 8"	30' - 8"	30' - 8"	33' - 8"	27' - 8"	27' - 8"	28' - 5"	27' - 8"
	In seismic zones ¹	27' - 11"	31' - 2"	31' - 2"	31' - 2"	34' - 2"	28' - 2"	28' - 2"	28' - 11"	28' - 2"
HD	Hoistway depth	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"	7' - 10"	9' - 5"	9' - 11"	10' - 6"	11' - 0"
	In seismic zones	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"	7' - 10"	9' - 5"	9' - 11"	10' - 6"	11' - 0"
RW	Rough opening width (minimum)	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"	4' - 6"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	16' - 4"	16' - 4"	16' - 4"	16' - 4"	17' - 8"	17' - 8"	17' - 8"	17' - 8"	17' - 8"
	@ 200 fpm ⁴	16' - 7"	16' - 7"	16' - 7"	16' - 7"	17' - 11"	17' - 11"	17' - 11"	17' - 11"	17' - 11"
	@ 350 fpm ⁴	17' - 1"	17' - 1"	17' - 1"	17' - 1"	18' - 5"	18' - 5"	18' - 5"	18' - 5"	18' - 5"
	@ 500 fpm ⁴	18' - 1"	18' - 1"	18' - 1"	18' - 1"	19' - 5"	19' - 5"	19' - 5"	19' - 5"	19' - 5"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Control Closet / Room										
CSD	Control space - single car	HD x 2' - 10" (minimum)								
CRD	Control room - single car	HD x 5' - 0" (minimum)								
CRD	Control room - double car	HD x 7' - 0" (minimum)								
CRD	Control room - triple car	HD x 9' - 0" or W x D								

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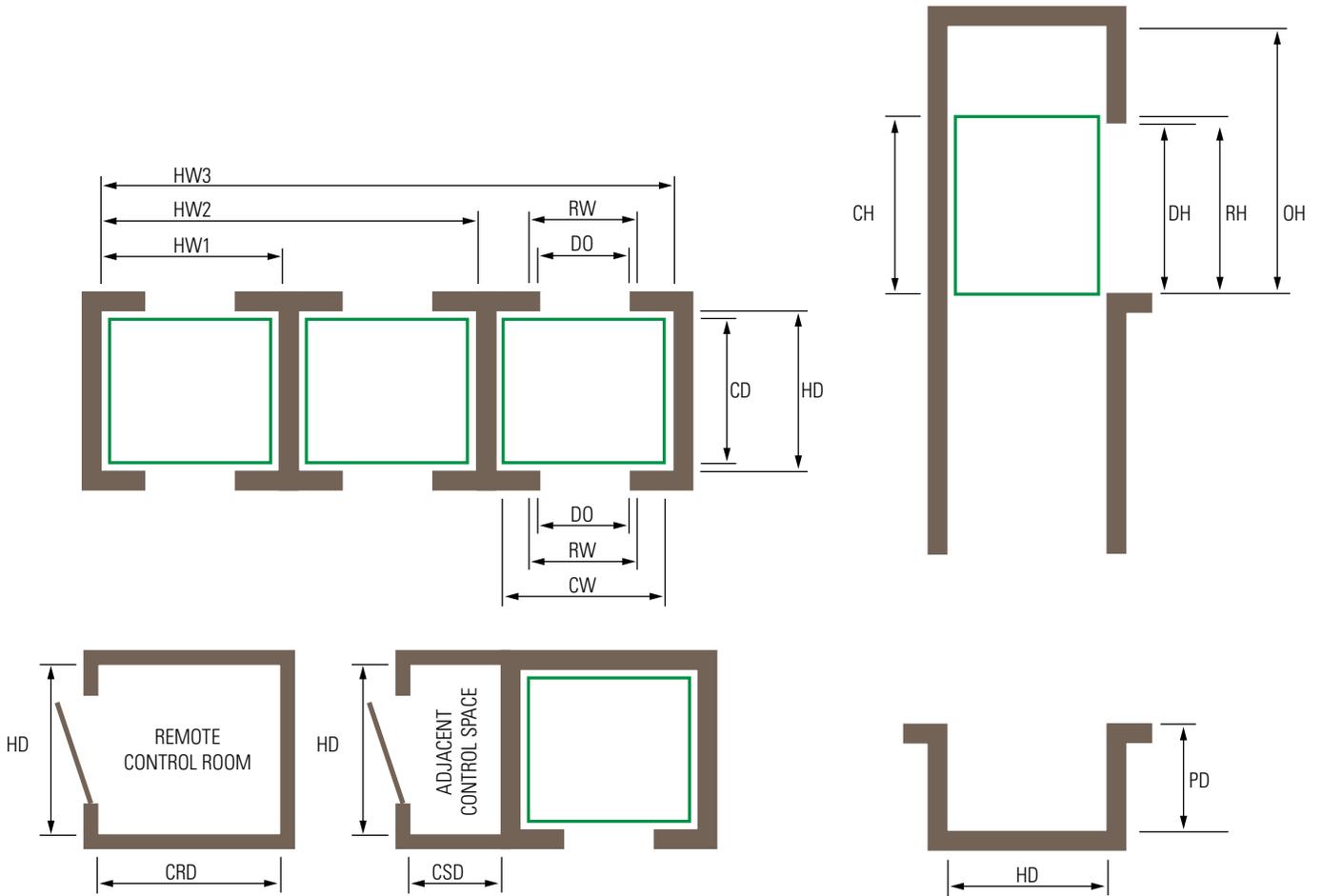
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Maximum stops: 32

Speed (ft/min.): 150, 200, 350 and 500 fpm

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		Passenger							
Capacity		2500	3000	3500	4000	H4000	H4500	H5000	H5000 AIA
Passenger capacity ²		16/15	20/18	23/21	27/25	27/25	30/28	33/31	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁵		76"	76"	84"	84"	84"	84"	84"	84"
Door types ⁵		1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car ³									
CW	Interior width	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	6' - 0"	5' - 9"
CD	Interior depth	4' - 4"	5' - 0"	5' - 8"	5' - 6"	7' - 5"	8' - 1"	8' - 6"	9' - 0"
	Square footage	29.3	33.8	38.3	42.6	42.7	46.5	51.0	51.8
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")							
DO	Car door width	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 0"
Hoistway									
HW1	Single hoistway ¹	10' - 0"	10' - 0"	10' - 0"	11' - 0"	9' - 0"	9' - 0"	9' - 3"	9' - 0"
	In seismic zones ¹	10' - 2"	10' - 2"	10' - 2"	11' - 2"	9' - 2"	9' - 2"	9' - 5"	9' - 2"
HW2	Double hoistway ¹	20' - 4"	20' - 4"	20' - 4"	22' - 4"	18' - 4"	18' - 4"	18' - 10"	18' - 4"
	In seismic zones ¹	20' - 8"	20' - 8"	20' - 8"	22' - 8"	18' - 8"	18' - 8"	19' - 2"	18' - 8"
HW3	Triple hoistway ¹	30' - 8"	30' - 8"	30' - 8"	33' - 8"	27' - 8"	27' - 8"	28' - 5"	27' - 8"
	In seismic zones ¹	31' - 2"	31' - 2"	31' - 2"	34' - 2"	28' - 2"	28' - 2"	28' - 11"	28' - 2"
HD	Hoistway depth	6' - 8"	7' - 4"	8' - 0"	8' - 4"	10' - 3"	10' - 11"	11' - 4"	11' - 10"
	In seismic zones	6' - 8"	7' - 4"	8' - 0"	8' - 4"	10' - 3"	10' - 11"	11' - 4"	11' - 10"
RW	Rough opening width (minimum)	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"	4' - 6"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	16' - 4"	16' - 4"	17' - 8"	17' - 8"	17' - 8"	17' - 8"	17' - 8"	17' - 8"
	@ 200 fpm ⁴	16' - 7"	16' - 7"	17' - 11"	17' - 11"	17' - 11"	17' - 11"	17' - 11"	17' - 11"
	@ 350 fpm ⁴	17' - 1"	17' - 1"	18' - 5"	18' - 5"	18' - 5"	18' - 5"	18' - 5"	18' - 5"
	@ 500 fpm ⁴	18' - 1"	18' - 1"	19' - 5"	19' - 5"	19' - 5"	19' - 5"	19' - 5"	19' - 5"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Control Closet / Room									
CSD	Control space - single car	HD x 2' - 10" (minimum)							
CRD	Control room - single car	HD x 5' - 0" (minimum)							
CRD	Control room - double car	HD x 7' - 0" (minimum)							
CRD	Control room - triple car	HD x 9' - 0" or W x D							

¹For elevators with occupied space below the elevator pit, this dimension will change. Please contact MCE to confirm these dimensions.

²Capacity requirements: US & Canada (see A17.1/B44, Appendix D).

³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 18' - 5" = 19' - 5". All overhead heights are clear under anything in the overhead structure.

⁵Gurney compliance on passenger cars up to 3500 lbs. capacity must be side slide doors.

Dimensions listed above for multiple hoistways are based on the use of 4" divider beams. If wider divider beams are utilized, a wider clear hoistway will be required.

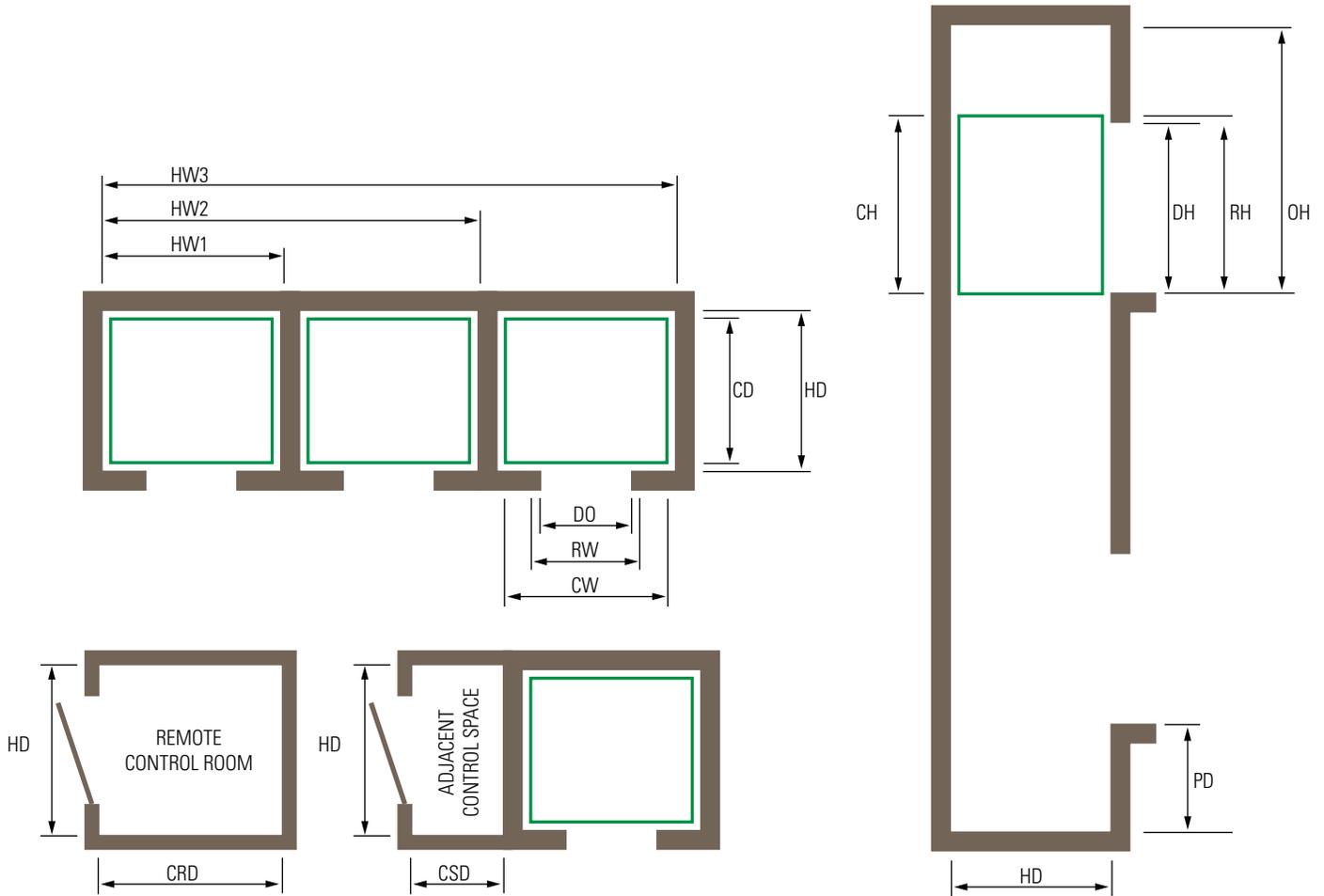
Reduced Overhead Option - Alternate methods for reducing overhead are now available depending on the application. Please contact your sales professional via one of the methods listed on this catalog for options.

Maximum travel: 300 ft.

Maximum stops: 32

Speed (ft/min.): 150, 200, 350 and 500 fpm

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		Passenger				
		2100	2500	3000	3500	4000
Capacity		13/12	16/15	20/18	23/21	27/25
Passenger capacity ²		13/12	16/15	20/18	23/21	27/25
Gurney compliance (24" x 76" or 24" x 84") ⁵		N	76"	76"	84"	84"
Door types ⁵		1SPSS	1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO
Car ³						
CW	Interior width	5' - 8 1/2"	6' - 8 1/2"	6' - 8 1/2"	6' - 8 1/2"	7' - 8 1/2"
CD	Interior depth	4' - 3 3/4"	4' - 3 3/4"	4' - 9 1/4"	5' - 5 1/4"	5' - 5 1/4"
	Square footage	24.6	28.9	32.0	36.5	41.9
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")				
DO	Car door width	3' - 0"	3' - 6"	3' - 6"	3' - 6"	4' - 0"
Hoistway						
HW1	Single hoistway	7' - 8"	8' - 8"	8' - 8"	8' - 8"	9' - 8"
	In seismic zones	7' - 10"	8' - 10"	8' - 10"	8' - 10"	9' - 10"
HW2	Double hoistway	15' - 8"	17' - 8"	17' - 8"	17' - 8"	19' - 8"
	In seismic zones	16' - 0"	18' - 0"	18' - 0"	18' - 0"	20' - 0"
HW3	Triple hoistway	23' - 8"	26' - 8"	26' - 8"	26' - 8"	29' - 8"
	In seismic zones	24' - 2"	27' - 2"	27' - 2"	27' - 2"	30' - 2"
HD	Hoistway depth ¹	7' - 0"	7' - 0"	7' - 6"	8' - 2"	8' - 2"
	In seismic zones ¹	7' - 0"	7' - 0"	7' - 6"	8' - 2"	8' - 2"
RW	Rough opening width (minimum)	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	17' - 8"	17' - 8"	17' - 8"	17' - 8"	17' - 8"
	@ 200 fpm ⁴	17' - 11"	17' - 11"	17' - 11"	17' - 11"	17' - 11"
	@ 350 fpm ⁴	18' - 5"	18' - 5"	18' - 5"	18' - 5"	18' - 5"
	@ 500 fpm ⁴	19' - 5"	19' - 5"	19' - 5"	19' - 5"	19' - 5"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Control Closet / Room						
CSD	Control space - single car	HD x 2' - 10" (minimum)				
CRD	Control room - single car	HD x 5' - 0" (minimum)				
CRD	Control room - double car	HD x 7' - 0" (minimum)				
CRD	Control room - triple car	HD x 9' - 0" or W x D				

¹For elevators with occupied space below the elevator pit, this dimension will change. Please contact MCE to confirm these dimensions.

²Capacity requirements: US & Canada (see A17.1/B44, Appendix D).

³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 18' - 3" = 19' - 3". All overhead heights are clear under anything in the overhead structure.

⁵Gurney compliance on passenger cars up to 3500 lbs. capacity must be side slide doors.

Dimensions listed above for multiple hoistways are based on the use of 4" divider beams. If wider divider beams are utilized, a wider clear hoistway will be required.

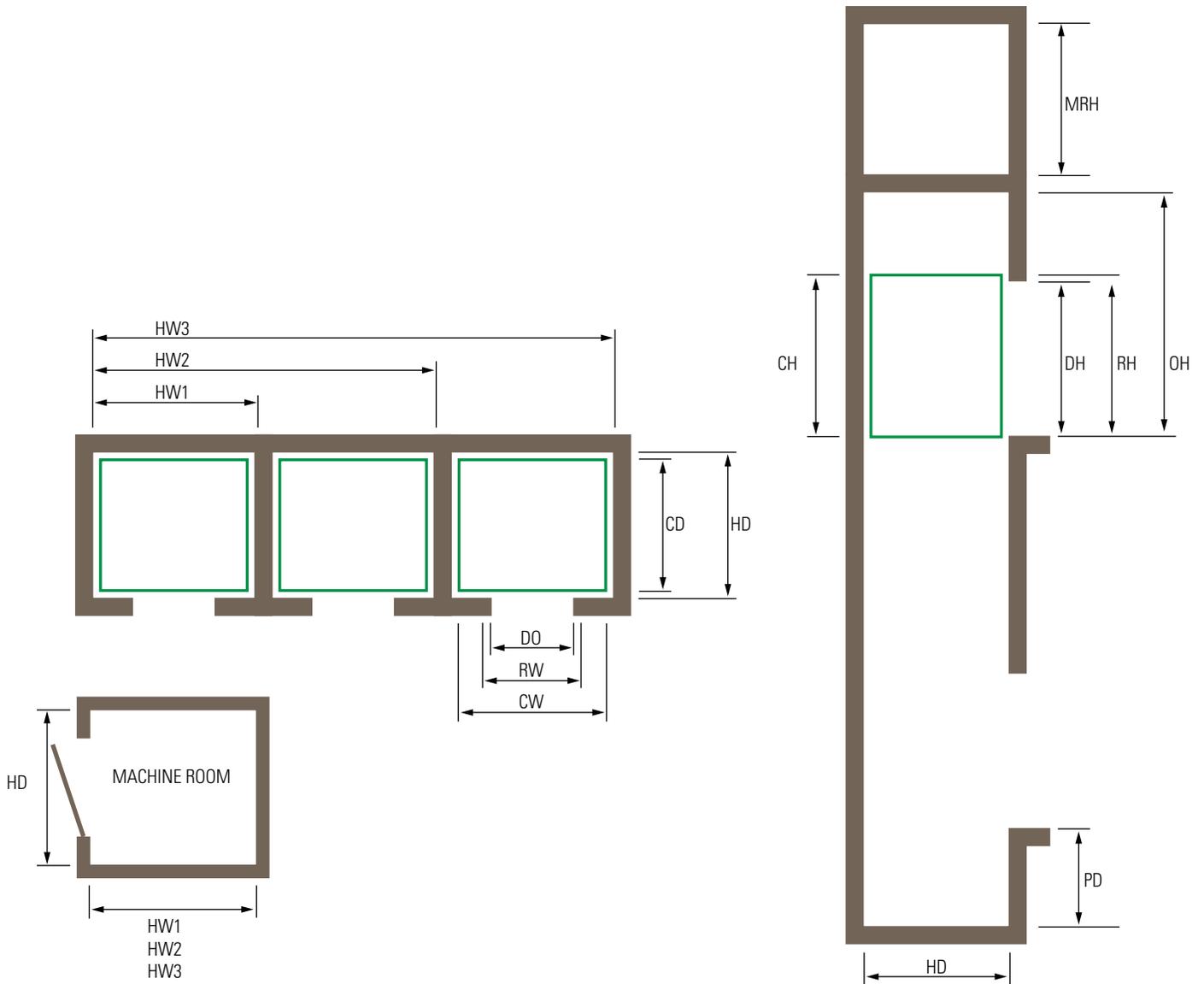
Reduced Overhead Option - Alternate methods for reducing overhead are now available depending on the application. Please contact your sales professional via one of the methods listed on this catalog for options.

Maximum travel: 300 ft.

Maximum stops: 32

Speed (ft./min.): 150, 200, 350 and 500 fpm

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		Passenger					Hospital			
Capacity		2100	2500	3000	3500	4000	H4000	H4500	H5000	H5000 AIA
Passenger capacity ²		13/12	16/15	20/18	23/21	27/25	27/25	30/28	33/31	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁵		N	76"	76"	84"	84"	84"	84"	84"	84"
Door types ⁵		1SPSS	1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car ³										
CW	Interior width	5' - 8"	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	6' - 0"	5' - 9"
CD	Interior depth	4' - 6"	4' - 4"	5' - 0"	5' - 8"	5' - 6"	7' - 5"	8' - 1"	8' - 6"	9' - 0"
	Square footage	25.5	29.3	33.8	38.3	42.6	42.6	46.5	51.0	51.8
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")					8' - 0" (Optional cab heights up to 10' - 0")			
DO	Car door width	3' - 0"	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 0"
Hoistway										
HW1	Single hoistway ¹	8' - 9"	9' - 10"	9' - 10"	9' - 10"	10' - 10"	8' - 10"	8' - 10"	9' - 1"	8' - 10"
	In seismic zones ¹	8' - 11"	10' - 0"	10' - 0"	10' - 0"	11' - 0"	9' - 0"	9' - 0"	9' - 3"	9' - 0"
HW2	Double hoistway ¹	17' - 10"	20' - 0"	20' - 0"	20' - 0"	22' - 0"	18' - 0"	18' - 0"	18' - 6"	18' - 0"
	In seismic zones ¹	18' - 2"	20' - 4"	20' - 4"	20' - 4"	22' - 4"	18' - 4"	18' - 4"	18' - 10"	18' - 4"
HW3	Triple hoistway ¹	26' - 11"	30' - 2"	30' - 2"	30' - 2"	33' - 2"	27' - 2"	27' - 2"	27' - 11"	27' - 2"
	In seismic zones ¹	27' - 5"	30' - 8"	30' - 8"	30' - 8"	33' - 8"	27' - 8"	27' - 8"	28' - 5"	27' - 8"
HD	Hoistway depth	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"	7' - 10"	9' - 5"	9' - 11"	10' - 6"	11' - 0"
	In seismic zones	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"	7' - 10"	9' - 5"	9' - 11"	10' - 6"	11' - 0"
RW	Rough opening width (minimum)	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"	4' - 6"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 200 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 350 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 500 fpm ⁴	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Machine Room										
	Control room - single car	HD x HW1 (minimum)					HD x HW1 (minimum)			
	Control room - double car	HD x HW2 (minimum)					HD x HW2 (minimum)			
	Control room - triple car	HD x HW3 (minimum)					HD x HW3 (minimum)			
MRH	Machine room height (minimum)	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"

¹For elevators with occupied space below the elevator pit, this dimension will change. Please contact MCE to confirm these dimensions.

²Capacity requirements: US & Canada (see A17.1/B44, Appendix D).

³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 13' - 6" = 14' - 6". All overhead heights are clear under anything in the overhead structure.

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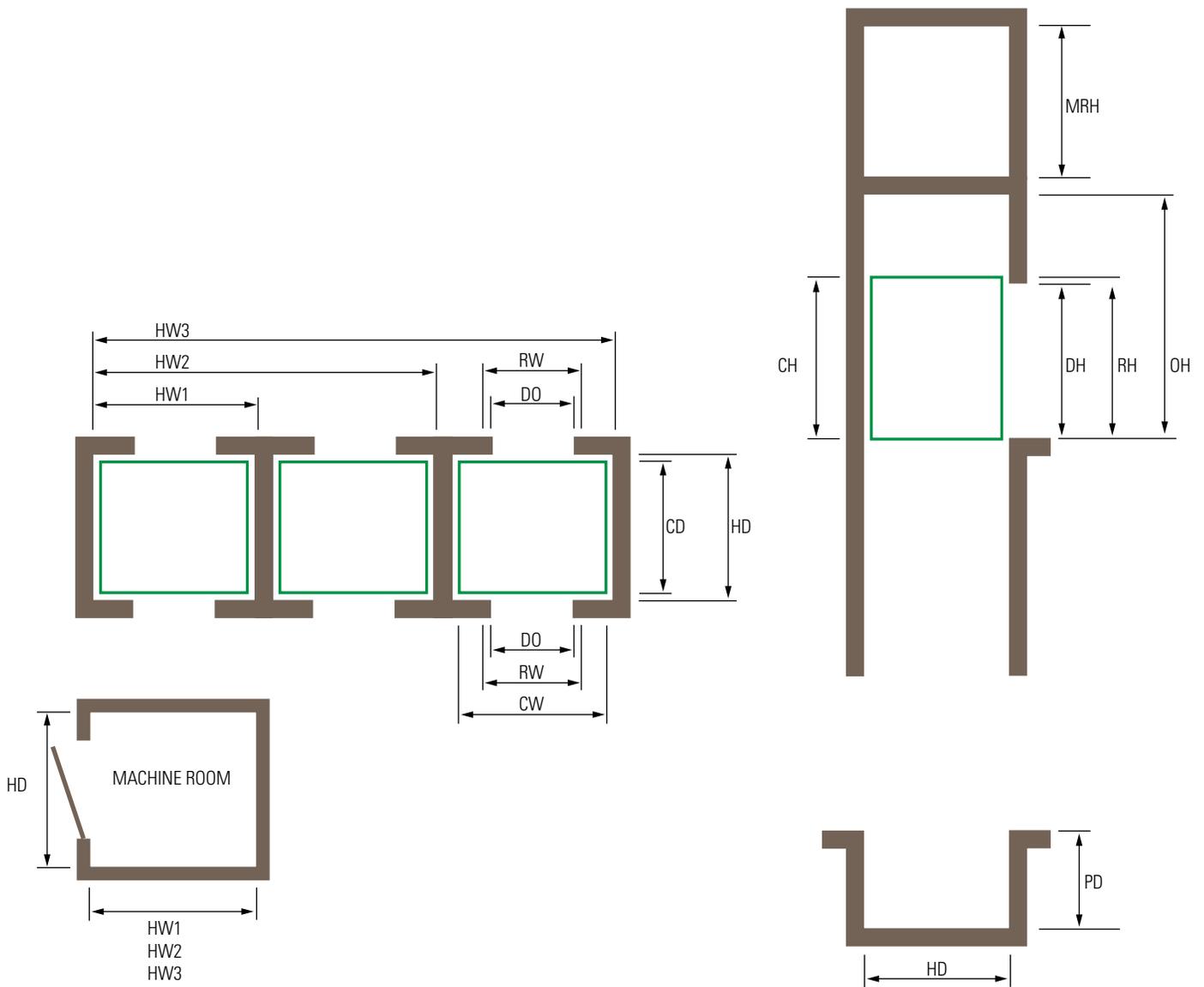
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Maximum travel: 300 ft.

Maximum stops: 32

Speed (ft./min.): 150, 200, 350 and 500 fpm

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		Passenger				Hospital			
Capacity		2500	3000	3500	4000	H4000	H4500	H5000	H5000 AIA
Passenger capacity ²		16/15	20/18	23/21	27/25	27/25	30/28	33/31	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁵		76"	76"	84"	84"	84"	84"	84"	84"
Door types ⁵		1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car³									
CW	Interior width	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	6' - 0"	5' - 9"
CD	Interior depth	4' - 4"	5' - 0"	5' - 8"	5' - 6"	7' - 5"	8' - 1"	8' - 6"	9' - 0"
	Square footage	29.3	33.8	38.3	42.6	42.6	46.5	51.0	51.8
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")				8' - 0" (Optional cab heights up to 10' - 0")			
DO	Car door width	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 0"
Hoistway									
HW1	Single hoistway 1	9' - 10"	9' - 10"	9' - 10"	10' - 10"	8' - 10"	8' - 10"	9' - 1"	8' - 10"
	In seismic zones ¹	10' - 0"	10' - 0"	10' - 0"	11' - 0"	9' - 0"	9' - 0"	9' - 3"	9' - 0"
HW2	Double hoistway ¹	20' - 0"	20' - 0"	20' - 0"	22' - 0"	18' - 0"	18' - 0"	18' - 6"	18' - 0"
	In seismic zones ¹	20' - 4"	20' - 4"	20' - 4"	22' - 4"	18' - 4"	18' - 4"	18' - 10"	18' - 4"
HW3	Triple hoistway ¹	30' - 2"	30' - 2"	30' - 2"	33' - 2"	27' - 2"	27' - 2"	27' - 11"	27' - 2"
	In seismic zones ¹	30' - 8"	30' - 8"	30' - 8"	33' - 8"	27' - 8"	27' - 8"	28' - 5"	27' - 8"
HD	Hoistway depth	6' - 8"	7' - 4"	8' - 0"	8' - 4"	10' - 3"	10' - 11"	11' - 4"	11' - 10"
	In seismic zones	6' - 8"	7' - 4"	8' - 0"	8' - 4"	10' - 3"	10' - 11"	11' - 4"	11' - 10"
RW	Rough opening width (minimum)	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"	4' - 6"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 200 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 350 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 500 fpm ⁴	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Machine Room									
	Control room - single car	HD x HW1 (minimum)				HD x HW1 (minimum)			
	Control room - double car	HD x HW2 (minimum)				HD x HW2 (minimum)			
	Control room - triple car	HD x HW3 (minimum)				HD x HW3 (minimum)			
MRH	Machine room height (minimum)	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"

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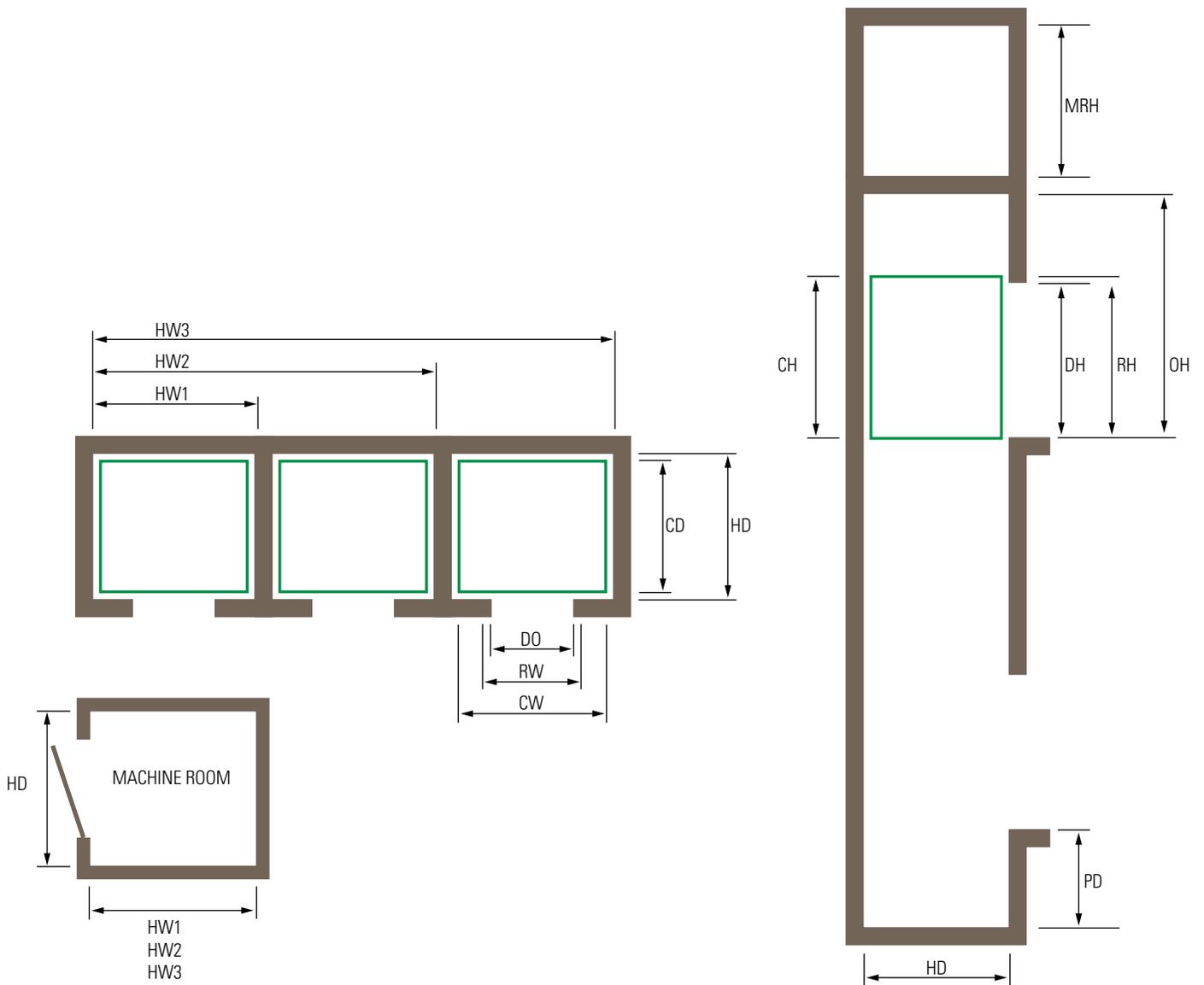
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		Passenger					Hospital			
Capacity		2100	2500	3000	3500	4000	H4000	H4500	H5000	H5000 AIA
Passenger capacity ²		13/12	16/15	20/18	23/21	27/25	27/25	30/28	33/31	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁵		N	76"	76"	84"	84"	84"	84"	84"	84"
Door types ⁵		1SPSS	1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car³										
CW	Interior width	5' - 8"	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	6' - 0"	5' - 9"
CD	Interior depth	4' - 6"	4' - 4"	5' - 0"	5' - 8"	5' - 6"	7' - 5"	8' - 1"	8' - 6"	9' - 0"
	Square footage	25.5	29.3	33.8	38.3	42.6	42.6	46.5	51.0	51.8
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")					8' - 0" (Optional cab heights up to 10' - 0")			
DO	Car door width	3' - 0"	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 0"
Hoistway										
HW1	Single hoistway ¹	8' - 9"	9' - 10"	9' - 10"	9' - 10"	10' - 10"	8' - 10"	8' - 10"	9' - 1"	8' - 10"
	In seismic zones ¹	8' - 11"	10' - 0"	10' - 0"	10' - 0"	11' - 0"	9' - 0"	9' - 0"	9' - 3"	9' - 0"
HW2	Double hoistway ¹	17' - 10"	20' - 0"	20' - 0"	20' - 0"	22' - 0"	18' - 0"	18' - 0"	18' - 6"	18' - 0"
	In seismic zones ¹	18' - 2"	20' - 4"	20' - 4"	20' - 4"	22' - 4"	18' - 4"	18' - 4"	18' - 10"	18' - 4"
HW3	Triple hoistway ¹	26' - 11"	30' - 2"	30' - 2"	30' - 2"	33' - 2"	27' - 2"	27' - 2"	27' - 11"	27' - 2"
	In seismic zones ¹	27' - 5"	30' - 8"	30' - 8"	30' - 8"	33' - 8"	27' - 8"	27' - 8"	28' - 5"	27' - 8"
HD	Hoistway depth	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"	7' - 10"	9' - 5"	9' - 11"	10' - 6"	11' - 0"
	In seismic zones	6' - 7 1/2"	6' - 7 1/2"	7' - 1 1/2"	7' - 10"	7' - 10"	9' - 5"	9' - 11"	10' - 6"	11' - 0"
RW	Rough opening width (minimum)	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"	4' - 6"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 200 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 350 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 500 fpm ⁴	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Machine Room										
	Control room - single car	HD x HW1 (minimum)					HD x HW1 (minimum)			
	Control room - double car	HD x HW2 (minimum)					HD x HW2 (minimum)			
	Control room - triple car	HD x HW3 (minimum)					HD x HW3 (minimum)			
MRH	Machine room height (minimum)	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"

¹For elevators with occupied space below the elevator pit, this dimension will change. Please contact MCE to confirm these dimensions.

²Capacity requirements: US & Canada (see A17.1/B44, Appendix D).

³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 13' - 6" = 14' - 6". All overhead heights are clear under anything in the overhead structure.

⁵Gurney compliance on passenger cars up to 3500 lbs. capacity must be side slide doors.

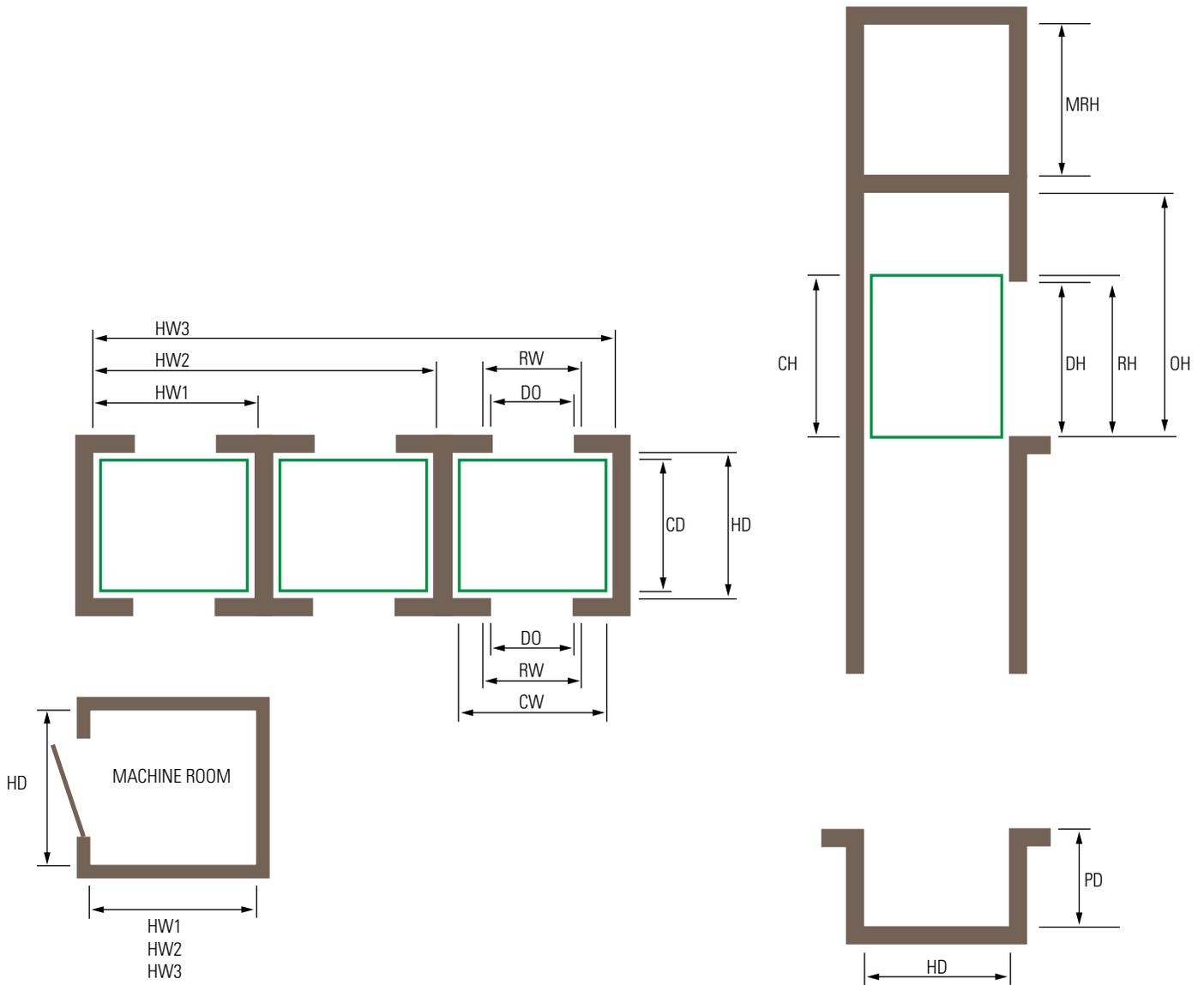
Dimensions listed above for multiple hoistways are based on the use of 4" divider beams. If wider divider beams are utilized, a wider clear hoistway will be required.

Maximum travel: 300 ft.

Maximum stops: 32

Speed (ft./min.): 150, 200, 350 and 500 fpm

For additional assistance, please contact MCE at 800.444.7442 x545 or elevators@mceinc.com.



In addition to MCE's standard applications listed in this planning guide, custom applications are also available from MCE. Consult with your MCE Sales Representative to review your special design requirements.

		Passenger				Hospital			
Capacity		2500	3000	3500	4000	H4000	H4500	H5000	H5000 AIA
Passenger capacity ²		16/15	20/18	23/21	27/25	27/25	30/28	33/31	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁵		76"	76"	84"	84"	84"	84"	84"	84"
Door types ⁵		1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car³									
CW	Interior width	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	6' - 0"	5' - 9"
CD	Interior depth	4' - 4"	5' - 0"	5' - 8"	5' - 6"	7' - 5"	8' - 1"	8' - 6"	9' - 0"
	Square footage	29.3	33.8	38.3	42.6	42.6	46.5	51.0	51.8
CH	Interior height ⁴	8' - 0" (Optional cab heights up to 10' - 0")				8' - 0" (Optional cab heights up to 10' - 0")			
DO	Car door width	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 0"
Hoistway									
HW1	Single hoistway 1	9' - 10"	9' - 10"	9' - 10"	10' - 10"	8' - 10"	8' - 10"	9' - 1"	8' - 10"
	In seismic zones ¹	10' - 0"	10' - 0"	10' - 0"	11' - 0"	9' - 0"	9' - 0"	9' - 3"	9' - 0"
HW2	Double hoistway ¹	20' - 0"	20' - 0"	20' - 0"	22' - 0"	18' - 0"	18' - 0"	18' - 6"	18' - 0"
	In seismic zones ¹	20' - 4"	20' - 4"	20' - 4"	22' - 4"	18' - 4"	18' - 4"	18' - 10"	18' - 4"
HW3	Triple hoistway ¹	30' - 2"	30' - 2"	30' - 2"	33' - 2"	27' - 2"	27' - 2"	27' - 11"	27' - 2"
	In seismic zones ¹	30' - 8"	30' - 8"	30' - 8"	33' - 8"	27' - 8"	27' - 8"	28' - 5"	27' - 8"
HD	Hoistway depth	6' - 8"	7' - 4"	8' - 0"	8' - 4"	10' - 3"	10' - 11"	11' - 4"	11' - 10"
	In seismic zones	6' - 8"	7' - 4"	8' - 0"	8' - 4"	10' - 3"	10' - 11"	11' - 4"	11' - 10"
RW	Rough opening width (minimum)	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"	4' - 6"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Clear overhead for 8' - 0" car @ 150 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 200 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 350 fpm ⁴	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"	13' - 6"
	@ 500 fpm ⁴	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"	14' - 2"
PD	Minimum pit depth @ 150 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 200 fpm	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"	5' - 6"
	@ 350 fpm	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"	6' - 0"
	@ 500 fpm	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"	6' - 6"
Machine Room									
	Control room - single car	HD x HW1 (minimum)				HD x HW1 (minimum)			
	Control room - double car	HD x HW2 (minimum)				HD x HW2 (minimum)			
	Control room - triple car	HD x HW3 (minimum)				HD x HW3 (minimum)			
MRH	Machine room height (minimum)	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"	8' - 0"

¹For elevators with occupied space below the elevator pit, this dimension will change. Please contact MCE to confirm these dimensions.

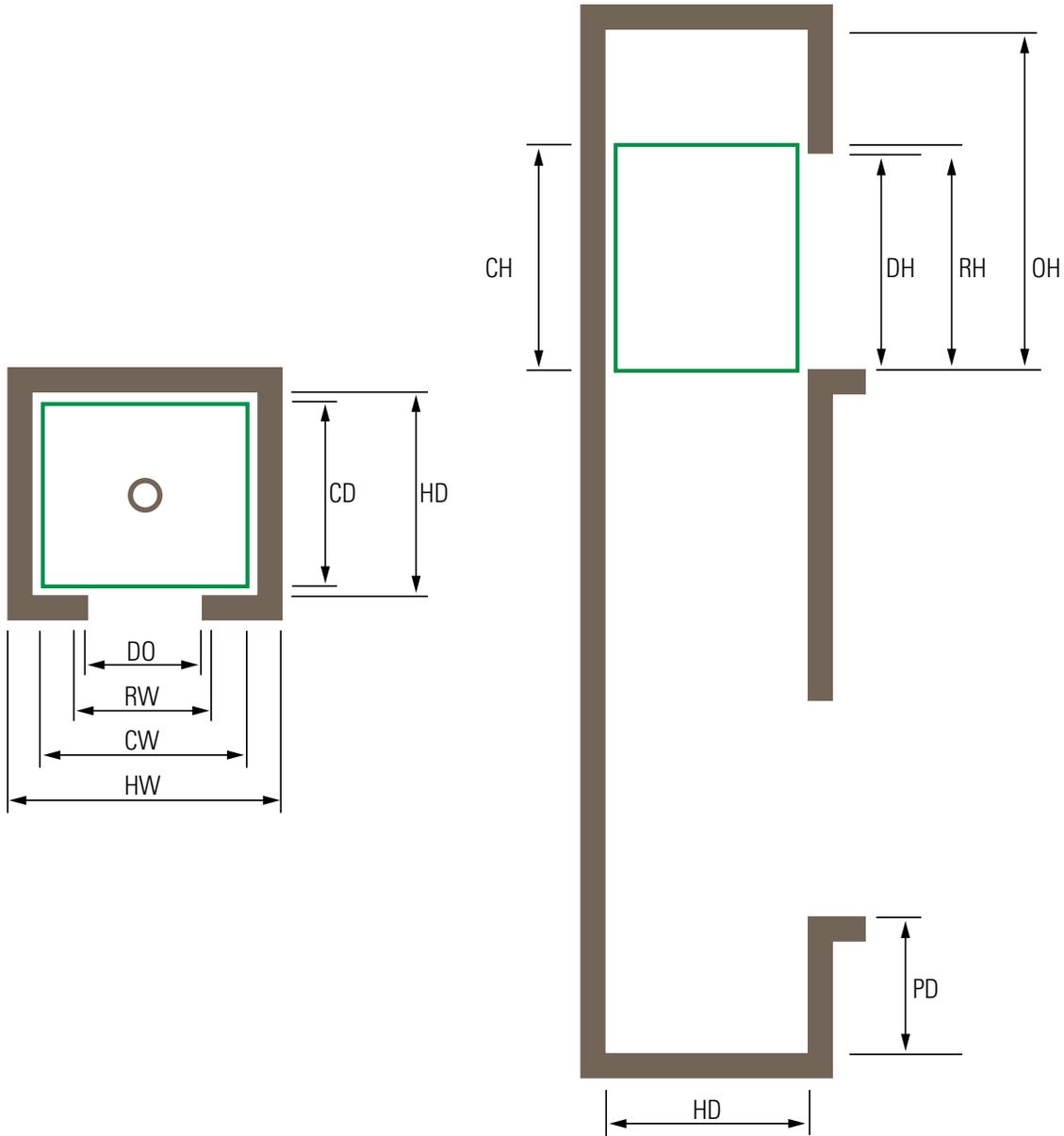
²Capacity requirements: US & Canada (see A17.1/B44, Appendix D).

³Interior dimensions may vary depending on standard interior finish selections.

⁴For cab heights greater than 8' - 0", add the measurement difference to the **OH** dimension. 350 fpm example: 9' - 0" minus 8' - 0" = 1' - 0" + 13' - 6" = 14' - 6". All overhead heights are clear under anything in the overhead structure.

⁵Gurney compliance on passenger cars up to 3500 lbs. capacity must be side slide doors.

Dimensions listed above for multiple hoistways are based on the use of 4" divider beams. If wider divider beams are utilized, a wider clear hoistway will be required.



In addition to MCE's standard applications listed in this planning guide, custom applications are also available from MCE. Consult with your MCE Sales Representative to review your special design requirements.

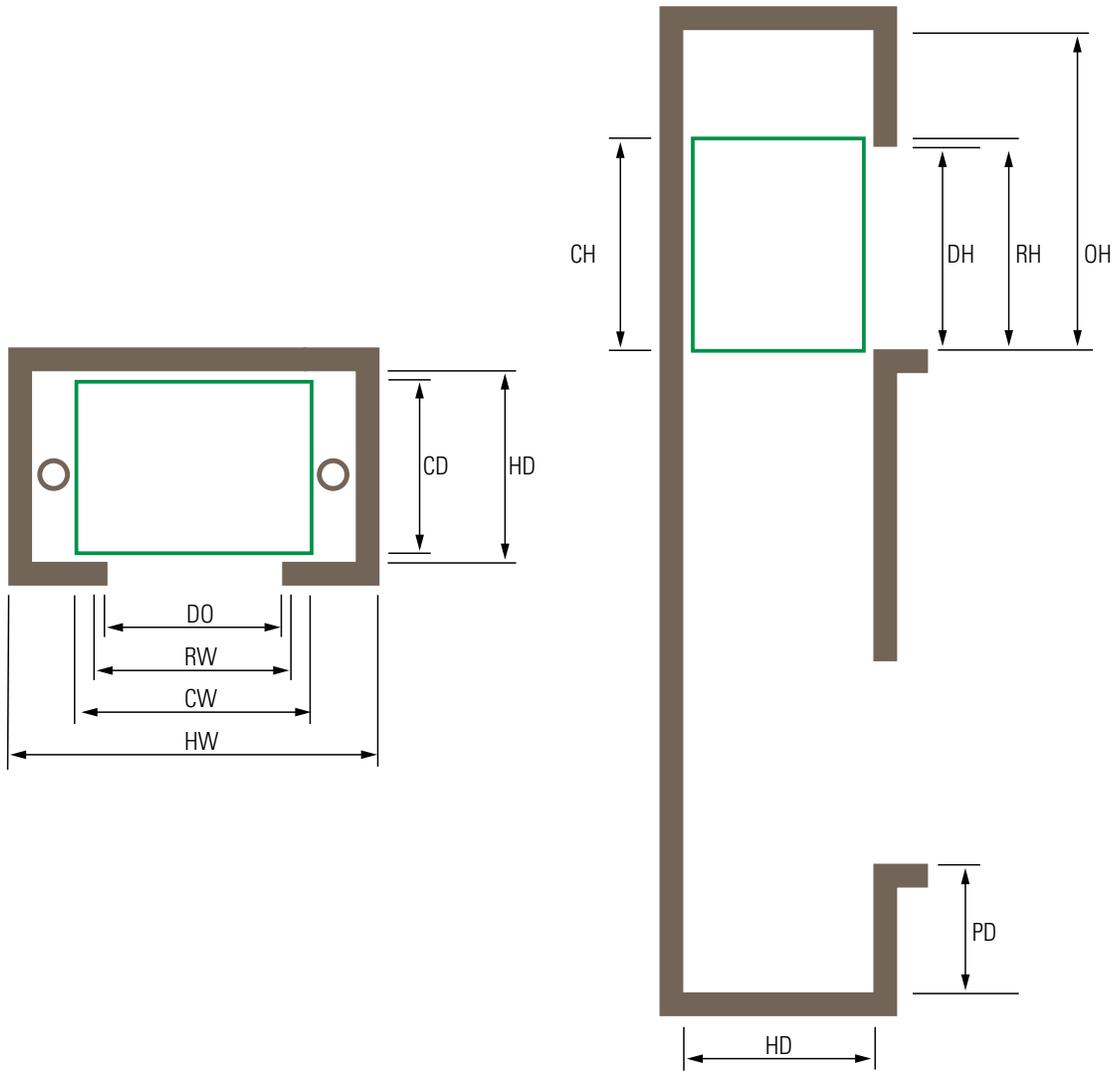
		Passenger							
Capacity		2100	2500	3000	3500	4000	H4000	H4500	H5000
Passenger capacity ¹		13/12	16/15	20/18	23/21	27/25	27/25	30/28	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁴		N	76"	76"	84"	84"	84"	84"	84"
Door types		1SPSS	1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car ²									
CW	Interior width (Front Only)	5' - 9"	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	5' - 9"
CD	Interior depth (Front Only)	4' - 3 1/2"	4' - 3 1/2"	4' - 8 1/2"	5' - 4 1/2"	5' - 3"	7' - 6"	8' - 3"	8' - 8"
	Square footage	24.7	28.9	31.8	36.3	40.7	43.1	47.4	49.8
CW	Interior width (Front / Rear)	5' - 9"	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	5' - 9"
CD	Interior depth (Front / Rear)	4' - 3 1/2"	4' - 3 1/2"	4' - 8 1/2"	5' - 4 1/2"	5' - 0 1/2"	7' - 6"	8' - 3"	8' - 8"
	Square footage	24.7	28.9	31.8	36.3	40.7	43.1	47.4	49.8
CH	Interior height ³	8' - 0" (Optional cab heights up to 10' - 0")							
DO	Car door width	3' - 0"	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 0"
Hoistway									
HW	Hoistway width (Front Only)	7' - 4"	8' - 4"	8' - 4"	8' - 4"	9' - 4"	7' - 4"	7' - 4"	7' - 6"
HD	Hoistway depth (Front Only)	5' - 9"	5' - 9"	6' - 2"	6' - 10"	7' - 0"	9' - 3"	10' - 0"	10' - 5 1/2"
HW	Hoistway width (Front / Rear)	7' - 4"	8' - 4"	8' - 4"	8' - 4"	9' - 4"	7' - 4"	7' - 4"	7' - 6"
HD	Hoistway depth (Front / Rear)	6' - 8 1/2"	6' - 8 1/2"	7' - 1 1/2"	7' - 9 1/2"	7' - 11 1/2"	10' - 5"	11' - 2"	11' - 7"
RW	Rough opening width (minimum)	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Minimum Clear overhead for 8' - 0" car ³	12' - 0"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	12' - 0"	12' - 0"
PD	Minimum pit depth	4' - 0"	4' - 0"	4' - 0"	4' - 0"	4' - 0"	4' - 0"	4' - 0"	4' - 0"

¹ Capacity requirements: US & Canada (see A17.1/B44, Appendix D)

² Interior dimensions may vary depending on standard interior finish selections

³ For cab heights greater than 8' - 0", add additional cab height to the OH dimension. Example: 8' - 0" cab height + 1' - 0" = 13' - 0" OH dimension. All overhead heights are clear under anything in the overhead structure.

⁴ Gurney compliance only available on passenger applications using side slide doors. Gurney requirements to be confirmed with inspection authority.



In addition to MCE's standard applications listed in this planning guide, custom applications are also available from MCE. Consult with your MCE Sales Representative to review your special design requirements.

		Passenger							
		2100	2500	3000	3500	4000	H4000	H4500	H5000
Capacity									
Passenger capacity ¹		13/12	16/15	20/18	23/21	27/25	27/25	30/28	33/31
Gurney compliance (24" x 76" or 24" x 84") ⁴		N	76"	76"	84"	84"	84"	84"	84"
Door types		1SPSS	1SPSS CO	1SPSS CO	1SPSS CO	2SPSS CO	2SPSS 2SPCO	2SPSS 2SPCO	2SPSS 2SPCO
Car²									
CW	Interior width (Front Only)	5' - 9"	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	5' - 9"
CD	Interior depth (Front Only)	4' - 3 1/2"	4' - 3 1/2"	4' - 8 1/2"	5' - 4 1/2"	5' - 3"	7' - 6"	8' - 3"	8' - 8"
	Square footage	24.7	28.9	31.8	36.3	40.7	43.1	47.4	49.8
CW	Interior width (Front / Rear)	5' - 9"	6' - 9"	6' - 9"	6' - 9"	7' - 9"	5' - 9"	5' - 9"	5' - 9"
CD	Interior depth (Front / Rear)	4' - 3 1/2"	4' - 3 1/2"	4' - 8 1/2"	5' - 4 1/2"	5' - 0 1/2"	7' - 6"	8' - 3"	8' - 8"
	Square footage	24.7	28.9	31.8	36.3	40.7	43.1	47.4	49.8
CH	Interior height ³	8' - 0" (Optional cab heights up to 10' - 0")							
DO	Car door width	3' - 0"	3' - 6"	3' - 6"	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 0"
Hoistway									
HW	Hoistway width (Front Only)	7' - 4"	8' - 4"	8' - 4"	8' - 4"	9' - 6"	7' - 7"	7' - 7"	7' - 8"
HD	Hoistway depth (Front Only)	5' - 9"	5' - 9"	6' - 2"	6' - 10"	7' - 0"	9' - 3"	10' - 0"	10' - 5 1/2"
HW	Hoistway width (Front / Rear)	7' - 4"	8' - 4"	8' - 4"	8' - 4"	9' - 6"	7' - 7"	7' - 7"	7' - 8"
HD	Hoistway depth (Front / Rear)	6' - 8 1/2"	6' - 8 1/2"	7' - 1 1/2"	7' - 9 1/2"	7' - 11 1/2"	10' - 5"	11' - 2"	11' - 7"
RW	Rough opening width (minimum)	3' - 6"	4' - 0"	4' - 0"	4' - 0"	4' - 6"	4' - 6"	4' - 6"	5' - 0"
RH	Rough opening height (minimum)	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"	7' - 3"
DH	Clear opening height	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"	7' - 0"
OH	Minimum Clear overhead for 8' - 0" car ³	12' - 6"	12' - 6"	12' - 6"	12' - 6"	12' - 6"	12' - 6"	12' - 6"	12' - 6"
PD	Minimum pit depth	4' - 0"	4' - 0"	4' - 0"	4' - 0"	4' - 0"	4' - 0"	4' - 0"	4' - 0"

¹Capacity requirements: US & Canada (see A17.1/B44, Appendix D)

²Interior dimensions may vary depending on standard interior finish selections

³For cab heights greater than 8' - 0", add additional cab height to the OH dimension. Example: 8' - 0" cab height + 1' - 0" = 13' - 0" OH dimension. All overhead heights are clear under anything in the overhead structure.

⁴Gurney compliance only available on passenger applications using side slide doors. Gurney requirements to be confirmed with inspection authority.

Electrical Requirements and Heat Release

MR and MRL ACPM 2:1 Applications

Speed	Capacity	HP	Full Load Amps			Accelerating Amps			Control BTU Output		Machine BTU Output	Isolation Transformer BTU
			@ 208V	@ 240V	@ 480V	@ 208V	@ 240V	@ 480V	Non-Regen	Regen		
150	2100	5.6	50	44	22	96	84	42	4013	2060	428	2390
150	2500	6.7	50	44	22	96	84	42	4013	2060	512	2390
150	3000	8	50	44	22	96	84	42	4682	2120	611	2390
150	3500	9.4	50	44	22	96	84	42	4682	2120	718	2390
150	4000	10.7	53	46	23	103	89	45	6925	2390	818	2561
150	4500	12	55	48	24	109	95	47	7417	2931	917	2731
150	5000	13.4	58	51	25	115	100	50	7417	2931	1024	2902
150	5500	14.7	61	53	27	121	105	53	7417	2931	1123	3073
150	6000	16	67	58	29	133	116	58	8185	2931	1222	3414
150	6500	17.4	69	61	30	139	121	61	8185	2931	1329	3585
150	7000	18.7	89	77	39	182	158	79	10780	5785	1429	4780
150	7500	20.1	91	80	40	188	163	82	12316	5785	1536	4950
150	8000	21.4	97	85	42	200	174	87	12316	5785	1635	5292
200	2100	7.5	50	44	22	96	84	42	4013	2060	573	2390
200	2500	8.9	50	44	22	96	84	42	4628	2060	680	2390
200	3000	10.7	50	44	22	96	84	42	6679	2120	818	2390
200	3500	12.5	53	46	23	103	89	45	6679	2120	955	2561
200	4000	14.3	61	53	27	121	105	53	6925	2390	1093	3073
200	4500	16	67	58	29	133	116	58	8185	2931	1222	3414
200	5000	17.8	69	61	30	139	121	61	8185	2931	1360	3585
200	5500	19.6	75	65	33	151	132	66	8185	2931	1498	3926
200	6000	21.4	80	70	35	164	142	71	9721	2931	1635	4268
200	6500	23.2	86	75	37	176	153	76	9721	2931	1773	4609
200	7000	25	108	94	47	225	195	98	12316	5785	1910	5975
200	7500	26.7	116	101	51	243	211	106	13852	5785	2040	6487
200	8000	28.5	122	106	53	255	222	111	13852	5785	2178	6828
350	2100	13.1	55	48	24	109	95	47	6611	2045	1001	2731
350	2500	15.6	61	53	27	121	105	53	7379	2045	1192	3073
350	3000	18.7	72	63	31	145	126	63	7448	2120	1429	3755
350	3500	21.8	80	70	35	164	142	71	8984	2120	1666	4268
350	4000	25	89	77	39	182	158	79	9230	2390	1910	4780
350	4500	28.1	97	85	42	200	174	87	11258	2931	2147	5292
350	5000	31.2	105	92	46	219	190	95	13562	2931	2384	5804
350	5500	34.3	114	99	50	237	206	103	13562	2931	2621	6316
350	6000	37.4	122	106	53	255	222	111	13562	2931	2858	6828
350	6500	40.6	130	113	57	274	238	119	16635	2931	3102	7340
350	7000	43.7	172	150	75	365	317	158	16157	5785	3339	9901
350	7500	46.8	186	162	81	396	343	172	16157	5785	3576	10754
350	8000	49.9	197	171	86	420	365	182	16157	5785	3813	11437
500	2100	18.7	72	63	31	145	126	63	7448	2120	1429	3755
500	2500	22.3	80	70	35	164	142	71	9325	2495	1704	4268
500	3000	26.7	94	82	41	194	169	84	10766	2390	2040	5121
500	3500	31.2	105	92	46	219	190	95	13562	2931	2384	5804
500	4000	35.7	116	101	51	243	211	106	11258	2931	2728	6487
500	4500	40.1	128	111	56	267	232	116	13562	2931	3064	7169
500	5000	44.6	139	121	60	292	253	127	13562	2931	3408	7852
500	5500	49	150	130	65	316	275	137	14381	3832	3744	8535
500	6000	53.5	161	140	70	341	296	148	20527	3832	4088	9218
500	6500	57.9	172	150	75	365	317	158	20527	3832	4424	9901
500	7000	62.4	236	205	102	506	439	219	26911	5785	4768	13827
500	7500	66.8	252	219	110	542	470	235	26911	5785	5104	14851
500	8000	71.3	269	234	117	579	502	251	26911	5785	5448	15875

Amperage values are based on front passenger door applications. For cars with rear doors, add 4A @ 208V, 2A @ 240V, and 1A @ 480V to the current values listed above.

Note: Electrical and heat release values are for initial estimate purposes only. Control and isolation transformer heat release values are based on a 50% duty cycle and 30% duty cycle for the hoist machine BTU values. All job specific values to be confirmed on MCE's Shop Drawings. Isolation transformers are not required for 480 VAC mainline applications unless called out by specification requirements. Freedom™ Elevators include isolation transformers on applications other than 480 VAC.



Motion 4000

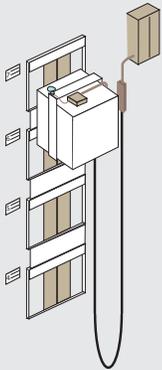
iControl



MCE's industry leading Motion 4000 and iControl are the cornerstone of the Freedom™ product line and ensure future serviceability options are the choice of the owner. As the industry leader for independent elevator control technology, MCE is able to provide state-of-the-art high rise motor control technology in low to mid-rise applications. This results in major performance improvement when compared to controls historically used in the low to mid-rise range.

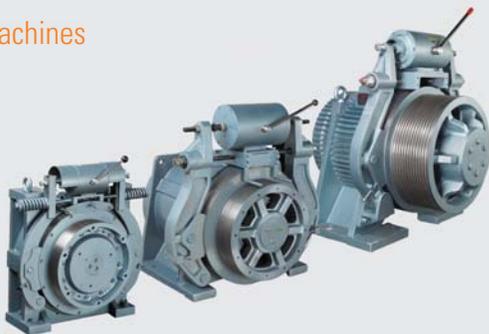
Motion 4000 and iControl enclosures measure: 42" W x 16" D x 72" H and weigh 700 - 800 lbs.

MRL Remote Rescue™



MCE's innovative MRL Remote Rescue™ incorporates video imaging and battery power to allow a technician to safely move the car to a landing if commercial power is lost. A car-mounted camera sends video to an LCD screen in the controller. Using a button to control battery-provided brake lift power, and watching the LCD, the technician moves the car to a landing, aligning a marker on the LCD with a graphic in the hoistway to stop the car in the landing zone.

ACPM Machines



With in-house machine and control expertise, MCE has teamed with Imperial Electric to engineer the best matched motor, control and brake combinations resulting in a wide variety of options. Use of a dual independently controlled brake system eliminates the need for a rope brake.

Cabs and Entrances

MCE elevator cabs, entrances and doors are engineered and manufactured to the highest industry standard. MCE entrances carry UL labeling on door panels and jambs. Three piece jambs are standard. Mitered and welded jambs are optional.

Jambs and Doors



Single slide door

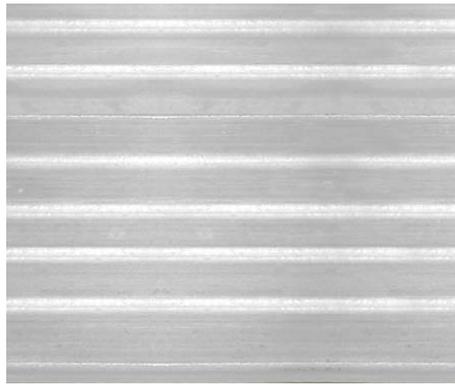


Center opening door



Two-speed side slide door

Sill Selection



Aluminum (standard)



Nickel silver



Bronze

Standard Metal Finishes



#4 brushed 304 stainless steel (standard)



#8 mirror 304 stainless steel



#4 brushed 60/40 muntz/bronze



#8 mirror 60/40 muntz/bronze



#4 brushed commercial bronze



#8 mirror commercial bronze

Standard elevator cabs feature removable vertical plastic laminate panels. A variety of pre-selected fire-rated plastic laminate choices are conveniently listed in this brochure. Optional horizontal or combination vertical/horizontal panels are also available. Custom cab interiors can also be provided based on your design specifications.

Vertical Wall Panels (standard)



Horizontal Wall Panels



Combination Vertical/ Horizontal Wall Panels



Stainless Steel #4 (standard)



Muntz/Bronze #4



Surfaces

Complete elevator package options include fire-rated, environmentally-friendly high-pressure laminates from world-leading producers of decorative surfacing products, including Wilsonart®.

Choose from a large selection of styles, colors and design innovations. Many of these Wilsonart® Fire-Rated laminates are GREENGUARD® Indoor Air Quality Certified. The GREENGUARD® Certification Program™ is an industry-independent, third-party testing program for low-emitting products and materials. To date, more than 100 manufacturers across various industries offer GREENGUARD® Indoor Air Quality Certified Products.

Fibers



4783-60 White Tigris



4669-60 Natural Tigris



4673-60 Saffron Tigris



4667-60 Green Tigris



4811-60 Silicon EV



4810-60 Titanium EV



4813-60 Nickel EV



4814-60 Tungsten EV



4820-60 Carbon EV

Metal Looks



4876-38 Sheer Mesh



4877-38 Grey Mesh



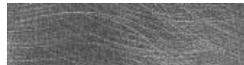
4878-38 Pewter Mesh



4881-38 Copper Mesh



4880-38 Carbon Mesh



4779-60 Pewter Brush



4823-60 Antique Brush



4794-60 Windswept Bronze



4795-60 Windswept Pewter



4860K-07* Silver Alchemy



4861K-07* Gold Alchemy

Stone Looks



4847-38 Mission Smoke



4850-38 Mission Stucco



4853-38 Mission Stone



4848-38 Mission Sage



4854-38 Mission Glaze



4886-38 Pearl Soapstone



4887-38 Tan Soapstone



4885-38 Green Soapstone



4882-38 Oiled Soapstone



4884-38 Flame Soapstone



4888-38 Rustic Slate

Abstracts



4843-60 Misted Zephyr



4841-60 Desert Zephyr



4858-60 Crisp Zephyr



4859-60 Spiced Zephyr

Linear Wood Looks



7939K-18* Blond Echo



7941K-18* Tan Echo



7952K-18* Asian Sand



7951K-18* Asian Sun



7949K-18* Asian Night



7944K-01* Madagascar

Traditional and Exotic Wood Looks



7928-38 Castle Oak



7925-38 Monticello Maple



10745-60 Fonthill Pear



7924K-07* Biltmore Cherry



7922K-07* Brighton Walnut



7909-60 Fusion Maple



10734-60 Limber Maple



7938-38 New Age Oak



7937-38 River Cherry



7947K-18* Rio



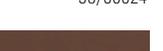
7923K-07* Versailles Anigre



7942K-07* Cocobala

* Premium products

This is just a representative sample of MCE's surfaces. For a complete list of surface options, please refer to MCE's Standard Finishes brochure.

						
RAL 1000 49/15200 38/15000	RAL 1017 49/22510 38/20017	RAL 2001 49/24560 38/23170	RAL 3003 49/31100 38/30003	RAL 3022 49/33700	RAL 5000 49/42200 38/40000	RAL 5015 49/42330 38/40015
						
RAL 1001 49/15190 38/15001	RAL 1018 49/21830 38/20018	RAL 2002 49/24550 38/25002	RAL 3004 49/33900 38/30004	RAL 3027 49/33660	RAL 5001 49/42210 38/40001	RAL 5017 49/40760 38/40017
						
RAL 1002 49/22590 38/20002	RAL 1019 49/13660 38/15019	RAL 2003 49/24540	RAL 3007 49/31910 38/30007	RAL 3031 49/34730 38/30031	RAL 5002 49/42220 38/40002	RAL 5018 49/41140 38/40020
						
RAL 1003 49/22580	RAL 1020 49/22500 38/20020	RAL 2004 49/24530	RAL 3009 49/31920 38/30009	RAL 4001 49/43160	RAL 5003 49/42230 38/40003	RAL 5019 49/42360 38/40019
						
RAL 1004 49/22570 38/20004	RAL 1023 49/22490 38/20023	RAL 2008 49/24340	RAL 3011 49/31090 38/30011	RAL 4002 49/31030 38/30008	RAL 5004 49/42240 38/40004	RAL 5020 49/44270 38/40018
						
RAL 1005 49/22560 38/20005	RAL 1024 49/22480 38/20024	RAL 2010 49/24520 38/25001	RAL 3012 49/31940 38/30012	RAL 4003 49/32270	RAL 5005 49/43190 38/40010	RAL 5021 49/41190 38/40021
						
RAL 1007 49/22540	RAL 1027 49/22470 38/20027	RAL 2011 49/24580	RAL 3013 49/31950 38/30013	RAL 4004 49/31020 38/30024	RAL 5007 49/42250 38/40007	RAL 5022 49/42390 38/40022
						
RAL 6007 49/52860 38/50007	RAL 6020 49/52710 38/50020	RAL 7001 49/72710 38/70003	RAL 7016 49/72830 38/70016	RAL 7037 49/72480 38/70037	RAL 8003 49/66140 38/60003	RAL 8024 49/66060 38/60024
						
RAL 6008 49/53240 38/50008	RAL 6021 49/52700 38/50021	RAL 7002 49/72720 38/70007	RAL 7021 49/72540 38/70021	RAL 7038 49/72470 38/70038	RAL 8004 49/66130 38/60004	RAL 8025 49/66050 38/60025
						
RAL 6009 49/52840 38/50009	RAL 6022 49/52690 38/50022	RAL 7003 49/72600 38/70017	RAL 7022 49/72850 38/70022	RAL 7039 49/71020 38/70039	RAL 8007 49/66120 38/60007	RAL 8028 49/66500 38/60028
						
RAL 6010 49/52830 38/50031	RAL 6024 49/52680 38/50024	RAL 7004 49/73300 38/70004	RAL 7023 49/72530 38/70023	RAL 7040 49/75470 38/70046	RAL 8008 49/66110 38/60008	RAL 9001 49/10016 38/10001
						
RAL 6011 49/52820 38/50011	RAL 6025 49/52670 38/50025	RAL 7005 49/72590 38/70005	RAL 7024 49/72870 38/70024	RAL 7042 49/73250 38/70042	RAL 8011 49/66100 38/60011	RAL 9002 49/70520 38/10002
						
RAL 6012 49/51540 38/50012	RAL 6026 49/52660 38/50026	RAL 7006 49/72580 38/70006	RAL 7026 49/72880 38/70026	RAL 7043 49/72460 38/70043	RAL 8012 49/66090 38/60012	RAL 9010 49/11500 38/10004

MCE elevator packages feature design-rich, dependable fixtures from Innovation Industries. Highly respected in the elevator industry, Innovation's high quality fixtures incorporate the following standard features: Six metals and finishes, ultra-bright LED illumination in amber, white, red, green or blue, digital position indicators, car station hands-free or cabinet-mounted telephones, scrolling message display, emergency light, service cabinet, voice annunciator, and project specific engraving.

Car Operating Panels and Hall Stations



Universal — (standard)

All car and hall stations and directional lanterns are available in a wide variety of configurations. Choose from two metal finishes, an array of push button options and more important features than found with any other manufacturer's standard line of fixtures.



Prestige — beauty and brawn

Prestige combines the best of all worlds — an ultra-sleek appearance combined with unsurpassed durability. Add in Innovation's Multi-Volt technology and wide range of illumination colors and you have the ultimate push button.



Premier — sophisticated and rugged

Sophisticated, elegant design with the toughness you'd expect from all of our fixtures. Available in rectangular or elliptical faceplate designs with a variety of push button configurations. The Premier Collection will meet the most demanding architectural application requirements.



Bruiser — heavy duty/vandal resistant

Everything about the Bruiser is designed and manufactured for rugged, unmatched strength and durability. Exclusive push button design virtually eliminates damage to internal studs or contacts.

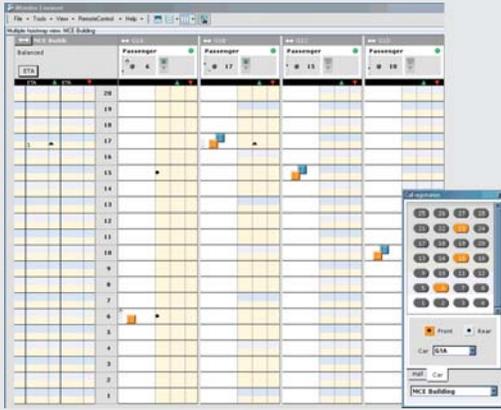
Push Buttons

Innovation Industries manufactures a variety of buttons and braille inserts. While it's not possible to include them all here, you can be assured that every push button device is built to the highest standards of quality to meet or exceed ADA and ASME A17.1 requirements and state and local codes. In addition, every Innovation push button incorporates exclusive Multi-Volt design.

BUTTON STYLE	MODEL	PROFILE	FIXTURE SERIES	DESCRIPTION	MATERIAL	CALIFORNIA CODE COMPLIANT	AVAILABLE BRAILLE OPTIONS	DESCRIPTION
	PB-1 (Standard)		Universal	Round, projecting, illuminated, black halo, white insert	Plastic	No		Round, 1.375" diameter
	PB-2		Universal	Round, flush, illuminated, black halo, white insert	Plastic	No		Square, 1.25" square
	PB-3 (CA Standard)		Universal	Round, illuminated, with flush black halo and projecting white insert	Plastic	Yes		Oval surround* (Standard)
	PB-4		Universal	Square, projecting, illuminated, black halo, white insert	Plastic	No	* PB-1, PB-2, PB-3, PB-13, PB-21, PB-29, PB-30, PB-31, PB-33, PB-35, PB-36, PB-37, PB-39, PB-44, PB-45, PB-47 only	
	PB-5		Universal	Square, flush, illuminated, black halo, white insert	Plastic	No		
	PB-6		Universal	Square, illuminated, with flush black halo and projecting white insert	Plastic	Yes		
	PB-21		Premier	Round, projecting, illuminated, metalized halo and insert	Plastic	No		
	PB-22		Premier	Square, projecting, illuminated, metalized halo and insert	Plastic	No		
	PB-23		Bruiser	Round, projecting, illuminated, with red center jewel, counter-bored stop	Metal	No		
	PB-27		Bruiser	Round, projecting, illuminated, with red center jewel, counter-bored stop	Metal	Yes		
	PB-29		Prestige	Round, projecting, illuminated, white halo, metal insert	Metal with plastic halo	No		
	PB-30		Prestige	Round, projecting, with illuminated flush white halo and projecting metal insert	Metal with plastic halo	Yes		
	PB-31		Premier	Round, illuminated, with flush metalized halo and projecting metalized insert	Plastic	Yes		
	PB-32		Premier	Square, illuminated, with flush metalized halo and projecting metalized insert	Plastic	Yes		
	PB-33		Premier	Round, flush, illuminated, metalized halo and insert	Plastic	No		
	PB-34		Premier	Square, flush, illuminated, metalized halo and insert	Plastic	No		

For more information, please request MCE's Standard Finishes brochure.

iMonitor

**Elevator group monitoring application**

iMonitor provides real-time viewing and access — for elevators just across the hall, in multiple buildings across a campus, even multiple sites across the country. iMonitor's graphical presentation and real-time connectivity provide up-to-the-minute information and allow you to take control if needed.

iMonitor provides general views of multiple elevator groups, hoistway views of multiple cars within a group or detailed views of selected cars. Create "connection sets" to display — each connection set consists of up to fifty connections to elevator group dispatchers, each of which may be at a different physical site.

iMonitor also allows you to configure hall and car call security, enable or disable special group modes of operation, recall a car to a floor you specify, control its door operation at that floor and enable or disable individual car operating modes.

High level multi-group view

Use iMonitor's high-level views to maintain a broad perspective on several groups simultaneously.

Detailed single-group view

Narrow your attention to cars in a particular elevator group with a click of the mouse.

iReport

**Comprehensive data storage, data analysis and report generation tool**

iReport takes advantage of the intelligence and communicating power designed into iControl elevator controls to automatically collect detailed information about minute-to-minute operation, system events, faults and operating status. iReport is easily configured to automatically contact those maintenance and administrative personnel who need to be advised whenever specific events occur. You can even choose days and times when contact should be initiated.

BMS-Link™

NAME	MODEL	IP ADDRESS	PORT	STATUS	VERSION	CONFIGURATION	LEARN
ain1	M2000/1000	11.26.82.41	4555	Normal	1.0.0	10 Floors, 2 Cars	Learned
ain2	M2000/1000	11.26.82.51	4555	Normal	1.1.0	4 Floors, 2 Cars	Learned
ain3	iCue	11.26.84.63	4555	Down, Alarm	2.2.1	6 Floors, 2 Cars	Learned

Click here to add a new device.

ADD DEVICE FORM

Name:

Model:

IP Address:

Port:

Integrate MCE control systems into your Building Management System

Powered by Niagara software and developed by Gemini Integration Services and MCE, a simple web “appliance” interfaces to the elevator or escalator system and provides web page status display and control to the building management system. For the first time, vertical transportation systems are open to the building management system.

Through BMS-Link™, your management system can place up or down direction hall calls and even tune elevator energy usage by activating any of three different Demand Response levels in reaction to building management system signals — saving energy and money. Cars may be placed out of service. Out of service cars may be returned to service at any time. Elevator system information may be collected over time and used to develop trend data.

TAPS® (Traction Auxiliary Power Supply)



Backup power for VVVF controllers

When commercial power is lost, TAPS® safely delivers the elevator car to a landing and maintains door power so passengers can exit. During normal operation, TAPS® builds and maintains reserve energy while continuously monitoring commercial power. TAPS® determines the optimum travel direction (next landing up or down) without requiring a load weighing system, ensuring that energy use is minimized and battery power is conserved for as long as possible. TAPS® features include:

- On board controller for intelligent operation
- Restart input from COP door open button
- Test button to simulate power loss
- Battery saving “rescue complete” input shuts off backup power when rescue is complete
- Lockable shut-off switch for additional safety while working on the elevator
- 3 KVA measures 18" H x 24" W x 24" D and weighs 234 lbs.
- 6 KVA unit utilizes two enclosures:
 - Enclosure 1 measures 18" H x 24" W x 24" D and weighs 246 lbs.
 - Enclosure 2 measures 34" H x 21 3/8" W x 32 3/8" D and weighs 334 lbs.

Destination Based Dispatching



Passenger selects desired floor, then is directed to specific elevator.

Customizable messaging
September 17, 2008 — 12:34 pm

MCE
Destination-Based Dispatching

MCE's Destination Based Dispatching is an innovative dispatching system that enhances building traffic flow by intelligently matching passengers to elevator cars and achieving optimal efficiency.

The technology behind this system uses complex algorithms, but the passenger experience is quite simple: After selecting the desired floor on a touchscreen, passengers are directed to the elevator that will take them to their destination. It's just that simple.

Effective Destination Based Dispatching assigns groups of passengers with the same destination to the same elevator, resulting in far fewer stops and improving transit time.

The following preparatory work is required in order to properly install the elevator equipment. The cost of this work is not included in the elevator equipment quotation.

1. Provide adequate on-site refuse containers for the disposal of the elevator packing material. Should adequate containers not be provided, the removal of the elevator packing material shall become the responsibility of the Buyer.
2. Proper lighting in all work areas.
3. A plumb and legal hoistway, to within one inch of plumb per 100 feet with no dimension smaller than shown on drawings, properly framed and enclosed; and including a pit of proper depth, and a pit ladder for each elevator. Hoistway, pit and overhead dimensions to be as specified on MCE's approved final layout drawings. Pit floor to support impact loads shown on drawings. Pit floor to be substantially level. Drains, sump, sump pump, lights, light switches and electrical outlets, access doors, waterproofing, access walks, handrails and hoistway ventilation as required.
4. Clear, flat, vertical or horizontal surfaces for mounting rail brackets at any location noted on MCE's approved final layout drawings shall be in the same vertical plane as the clear hoistway line. This includes divider beams between cars for multiple elevators in a common hoistway.
5. Adequate supports for foundations to carry the loads of all equipment, including overhead machine, machine beams located in hoistway and guide rail brackets from pit floor to the top of the hoistway and not spanning further than allowed by the governing code authority. When maximum bracket span is exceeded additional support shall be provided at Buyer's expense. Any bracket mounting surface that is not in line with the clear hoistway dimension detailed on MCE's approved final layout drawings may need to be extended to meet the proper dimension.
6. Provide a code compliant control closet or control room with access and ventilation in accordance with all applicable codes and regulations. The control closet or control room shall be maintained at a temperature between 32° F (0° C) and 104° F (40° C). Relative humidity not to exceed 95% non-condensing. Please validate that local codes do not require a tighter temperature range or higher ventilation requirements. If the control location will exceed these parameters, please contact your MCE representative for control enclosure options. Provide lights, light switches and electrical outlets as required.
7. Complete three phase connections from the electric power mains to each controller, including necessary circuit breakers and/or fused mainline disconnect switches along with compliant piping and conduit. Each car shall also include an earth ground. Materials and installation shall meet all applicable national and local electrical codes.
8. Single phase 120 VAC power for car lighting and alarm circuit provided to each controller, including necessary circuit breaker and/or fused disconnect switches along with compliant piping and conduit. Materials and installation shall meet all applicable national and local electrical codes.
9. Temporary power shall be provided without cost to the elevator contractor during construction and shall match all characteristics of the permanent power supply.
10. Divider beams for rail brackets shall be provided as required by code and design requirements as noted on job specific Shop Drawings.
11. Blockout/cutout through wall as required, to accommodate hall button boxes, signal fixtures, hatch duct, governor access doors and rope drops in machine room.
12. Cutting of walls, floor, etc. and removal of such obstructions as may be necessary for proper installation of the elevator.
13. Provide for any repairs such as grouting, patching and painting made necessary by such cutting.
14. Grouting of door sills, hoistway frames and signal fixtures after installation of the elevator equipment.
15. All painting, except for factory MCE primer and paint.
16. Provide finished floor marks visible from hoistway openings at all landings.
17. 75° bevels on all projections, recesses or setbacks over 4 inches except for sides used for loading and unloading.
18. Sumps and/or sump pumps (where permitted) located within the pit may not interfere with the elevator equipment.

* Refer to quote and drawings for additional materials to be supplied by others.

19. Provide hoistway walls designed and constructed in accordance with the required fire rating (including those places where elevator fixture boxes, rail bracket fastenings or any other object requires penetrations into the hoistway walls).
20. Temporary enclosures, barricades and other protection for open hoistways and elevator work area during the time the elevator is being installed, to meet all installation safety codes.
21. Smoke detectors/sensing devices and contacts wired to elevator control, as required by local code. A means to automatically disconnect the main line power supply to the elevator, prior to the application of water in the elevator control closet or control room will be furnished by the electrical contractor. This 'means' shall not be self resetting.
22. All telephone wiring to the control panel and installation of telephone instrument or other communication equipment in the elevator cab with all connections to the elevator in the control closet or control room.
23. A hoist beam located as indicated on MCE's approved final layout drawings. The hoist beam shall be capable of supporting the load requirement noted on the MCE Shop Drawings.
24. A standby power source shall be provided, including necessary transfer switches and auxiliary contact, where elevator operation from an alternate power supply is required.
25. Provide 15-amp 120V AC fused service with ground (supplied through automatic emergency lighting supply if available in building) connected to each elevator signal control cabinet for car lighting.
26. Provide all fire alarm initiating signals as required by all national, state and local codes for termination at the primary elevator signal control cabinet in each group.
27. Adequate storage facilities for elevator equipment shall be provided prior to and during installation at the ground level within close proximity to the elevator hoistway.
28. Installation of anchors, embeds and sleeves.
29. Dried-in hoistway(s) and machine/control room(s). Any water damage to elevator materials will be subject to MCE's warranty conditions.
30. Sill angles if required.
31. In locations where there is a difference in elevation between the floors of adjacent pits, a metal guard is to be installed to not less than 79" above the level of the higher pit floor. If a difference in elevation is 24" or less a standard railing is acceptable.
32. Sufficient supports for machine beams, including wall pockets and patching after beams are set in place. Building interface and mounting of beams to be per MCE's requirements as indicated on MCE's approved final layout drawings.

Non-Proprietary Traction Elevator Affidavit

You have a choice when selecting new traction elevator products, but will you have the full maintenance providers or the elevator contractor of your choice for maintenance and repairs once the installed elevator decision is made?

If you haven't decided, narrow your elevator product decision by using the following 10 questions to qualify your decision. Utilizing non-proprietary/serviceable and maintainable traction elevators will protect your elevator investment.

- Yes No Can an alternate hoist machine manufacturer be utilized for replacement of the hoist machine without patented and/or non-standard sole-sourced design restrictions?
- Yes No Are maintenance, adjustment and repair classes available to any elevator contractor for the elevator product being evaluated?
- Yes No Are the suspension ropes industry standard and available through multiple sources?
- Yes No Can the new proposed elevator be provided with various non-proprietary/serviceable and maintainable control systems?
- Yes No Are all diagnostics allowing full access and system memories on-board and designed to remain a part of the elevator system regardless of the contracted elevator service company?
- Yes No Are the fixtures and door operator capable of being interfaced discretely without need for serial communication from the original control system?
- Yes No Can the traction elevator being considered be purchased by any elevator contractor?
- Yes No Can any elevator maintenance provider obtain all replacement parts assemblies from the original elevator manufacturer distributor along with technical phone support?
- Yes No Can a complete replacement parts list, including every part associated with the elevator, be provided to any elevator service provider including the current pricing available to the open market?
- Yes No Will the elevator manufacturer provide complete replacements of electrical prints, circuit diagrams, mechanical prints, installation manual, maintenance manual and repair manuals for a low cost replacement fee?

* If any of the questions were answered NO, or if the elevator manufacturer refuses to complete this affidavit, you are evaluating an elevator with proprietary aspects that could restrict your full maintenance provider choices and/or the ability for other elevator contractors to effectively repair this product.

AFFIRMATION

The undersigned abides by and affirms that the conditions described above are hereby made a part of the equipment proposal. The building owner, elevator contractor, and/or consultant shall reasonably rely upon these provisions.

Elevator Manufacturer/Project Name/ Model

Elevator Manufacturer's Office Signature

Date

Elevator Manufacturer's Office Printed Name & Title

All illustrations, specifications and dimensions are based on information in effect at the time of this publication printing date. Motion Control Engineering reserves the right to change specifications, designs and materials utilized and may discontinue items without prior notice or obligations.