

Orona 3G

1010

## Machine-room-less electrical gearless solutions (MRLG)

High efficiency for residential and low rise commercial developments.

Optimum use of space and latest direct drive (gearless) technology.

The base solution.

Latest technology, affordable and functional.

### General specifications

Load	320-450-630 kg
Capacity	4-6-8 persons
Speed	1 m/s
Maximum travel	45 m
Maximum floors served	16 floors
Entrances	1 front / 2 open through / 2 front & side
Drive system	Direct gearless (180 starts per hour)
Controller	ARCA II controller, low energy microprocessor
Door types	Automatic side-opening / Automatic central-opening
Clear door opening	700 / 800 / 900
Door height	2,000 / 2,100
Car dimensions	Standard car dimensions
Internal car height	2,100 / 2,200
Aesthetic solutions	DR1 / DR2 / DR3 / DR4 / DR5 / DR6 / DR7 / DR8 DS1 / DS2 / DS3 / DS4 / DS5 / Orona 3G Domo Plus

Standard    Optional



#### 1 MRL

Compact machine-room-less solution, with optional reduced headroom version.



#### 2 OPTIMISED PASSENGER UNIT

Saves space, reduces weight, improves safety, and improves the installation process.



#### 3 ACCESSIBLE SPACE BELLOW THE PIT

Adapts the lift to suit buildings which have an accessible space below the pit (optional).



#### 4 TWO-WAY COMMUNICATIONS

Between the lift and the emergency 24-hour Service Call Centre according to EN 81-28.



#### 5 TRACTION ROPES

Orona small diameter ropes replace traditional steel ropes. As a result of their lighter weight, longer lifespan and greater flexibility, it is possible to use a more compact, efficient and eco-friendly gearless machine.



#### 6 DRIVE

Compact, quiet, gearless, energy efficient, speed regulated (VVVF) permanent magnet electric motor.



#### 7 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infrared door protection edges.



#### 8 AUTOMATIC RESCUE SYSTEM

With floor level indication to ensure fast, efficient and safe evacuation of passengers in the event of an emergency. As an option, the system can incorporate a fully-automatic rescue device to evacuate passengers in the event of a power failure.



## Standard dimensions

Load / Capacity		Car			Lift shaft *								
Persons	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		Side-opening doors		Central-opening doors		HF Pit	HUP Last Floor	
					Accessibility	No. of entrances	AH <sup>1</sup> Width	FH <sup>2</sup> Depth	AH Width	FH <sup>3</sup> Depth			
4	320 kg	825	1,100	700		1	1,325	1,350	1,600	1,300	1,000 (850) <sup>4</sup>	3,400	
						2 x 180 <sup>0</sup>		1,500		1,400			
						2 x 90 <sup>0</sup>	1,450	1,350					
6	450 kg	1,000	1,250	800	♿	1	1,500	1,500	1,800	1,450			3,400 (3,000) <sup>5</sup>
						2 x 180 <sup>0</sup>		1,650		1,550			
						2 x 90 <sup>0</sup>	1,625	1,500		3,400			
8	630 kg	1,100	1,400	900	♿	1	1,600	1,650	2,000	1,600	3,400 (3,000) <sup>5</sup>		
						2 x 180 <sup>0</sup>		1,800		1,700			
						2 x 90 <sup>0</sup>	1,725	1,650					
			♿	1	1,700	1,500	2000	1,450	3,400				
			2 x 180 <sup>0</sup>	1,650		1,550							
			2 x 90 <sup>0</sup>	1,825		1,575							

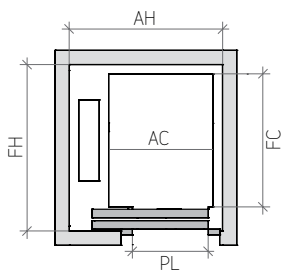
- 1 Accessible space below the pit (counterweight with safety gear) add 50 mm to AH
- 2 Shaft depth with door tracks projecting 60 mm on the landing
- 3 Shaft depth with door tracks projecting 40 mm on the landing

- 4 HF reduced pit optional 850 mm
- 5 Minimum HUP for internal car height (HC) of 2,100 mm (HUP = HC + 1,300)  
HUP reduced headroom optional only for 6 and 8 persons (HUP = HC + 900)

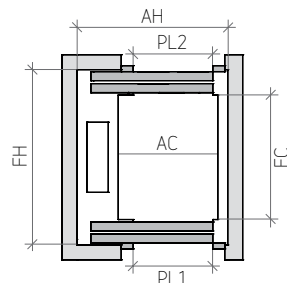
\* Minimum plumb measurements

## Layout

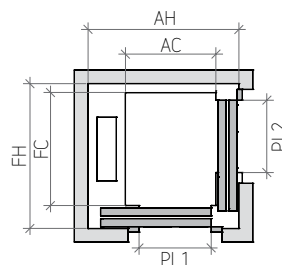
1 ENTRANCE



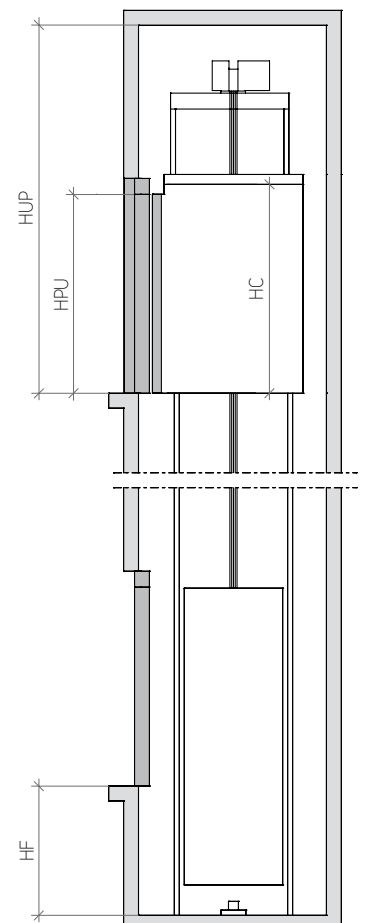
2 ENTRANCES (OPEN THROUGH)



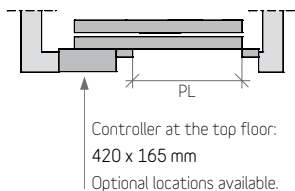
2 ENTRANCES (FRONT & SIDE)



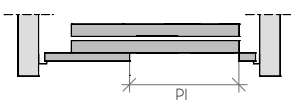
VERTICAL SECTION



CONTROLLER DETAIL



WIDE-FRAMED DOOR DETAIL



Orona 3G

1015

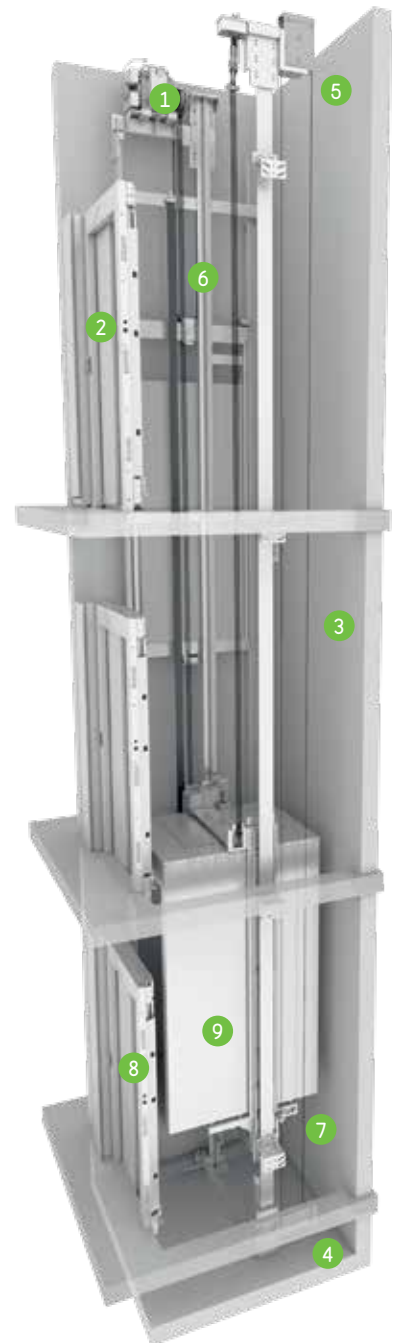
## Machine-room-less electrical gearless solutions (MRLG)

High efficiency for residential and low rise commercial developments. Optimum use of space and latest direct drive (gearless) technology. The customised solution. Maximum flexibility and performance.

### General specifications

Load	320 to 1,000 kg
Capacity	4 to 13 persons
Speed	1 - 1.6 m/s
Maximum travel	50 - 60 m
Maximum floors served	16 - 21 floors
Entrances	1 front / 2 open through
Drive system	Direct gearless
Controller	ARCA II controller, low energy microprocessor
Door types	Automatic side-opening / Automatic central-opening
Clear door opening	From 600 to 1,500 mm (in 100 mm increments)
Door height	2,000 / 2,100 / 2,200 / 2,300
Car dimensions	Parametric car dimensions
Internal car height	2,100 / 2,200 / 2,300 / 2,400
Aesthetic solutions	DR1 / DR2 / DR3 / DR4 / DR5 / DR6 / DR7 / DR8 DS1 / DS2 / DS3 / DS4 / DS5 / Orona 3G Domo Plus

Standard Optional



#### 1 DRIVE

Compact, quiet, gearless, energy efficient, speed regulated (VVVF) permanent magnet electric motor.



#### 2 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and photoelectric curtain. Optional Solid Door for high flow situations.



#### 3 PARAMETRIC/ FLEXIBLE

Flexible car and door configurations ensure available shaft dimensions can be optimised (optional).



#### 4 ACCESSIBLE SPACE BELOW THE PIT

Adapts the lift to suit buildings which have an accessible space below the pit (optional).



#### 5 REDUCED HEADROOM

Optional feature to allow the reduction of the shaft headroom when required, whilst maintaining the maximum safety and protection for maintenance staff.



#### 6 TRACTION ROPES

Orona small diameter ropes replace traditional steel ropes. As a result of their lighter weight, longer lifespan and greater flexibility, it is possible to use a more compact, efficient and eco-friendly gearless machine.



#### 7 SHAFT USABILITY

Lifts designed especially to use all the shaft space available, obtaining a good relation between the space available and the number of passengers to be transported.



#### 8 AUTOMATIC RESCUE SYSTEM

With floor level indication to ensure fast, efficient and safe evacuation of passengers in the event of an emergency. As an option, the system can incorporate a fully-automatic rescue device to evacuate passengers in the event of a power failure.



#### 9 TWO-WAY COMMUNICATIONS

Between the lift and the emergency 24-hour Service Call Centre according to EN 81-28.



ECO-EFFICIENCY



ADAPTABILITY



DESIGN AND ACCESSIBILITY



CONTROL AND SAFETY

## Standard dimensions

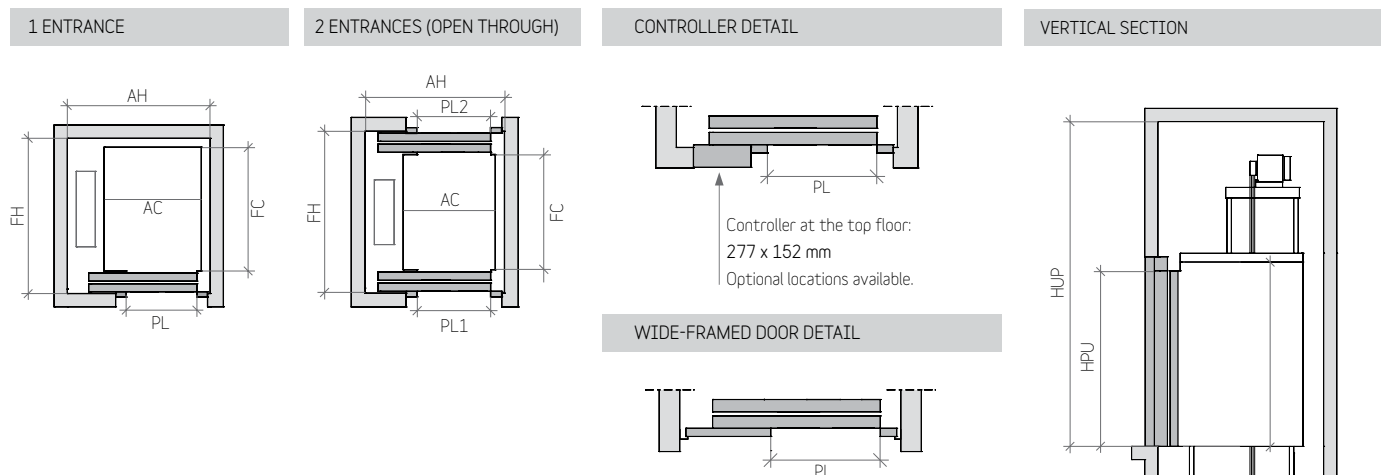
Load / Capacity			Car			Lift shaft *							
Speed	Persons	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		Side-opening doors		Central-opening doors		HF Pit	HUP Last Floor
						Accessibility	No. of entrances	AH <sup>1</sup> Width	FH <sup>2</sup> Depth	AH Width	FH <sup>3</sup> Depth		
1 m/s	4	320 kg	825	1,100	700		1	1,300	1,350				
							2 x 180 <sup>0</sup>		1,500				
	6	450 kg	1,000	1,250	800	♿	1	1,450	1,500	1,725	1,450		
							2 x 180 <sup>0</sup>		1,650		1,550		
	8	630 kg	1,100	1,400	900		1	1,600	1,675	1,925	1,625		
							2 x 180 <sup>0</sup>		1,850		1,750		
	10	800 kg	1,350	1,400	900	♿	1	1,825	1,675	1,925	1,625	1,000 (830) <sup>4</sup>	3,400 (3,050) <sup>5</sup>
							2 x 180 <sup>0</sup>		1,850		1,750		
13	1,000 kg	1,600	1,400	1,000		1	2,075	1,675	2,150	1,625			
						2 x 180 <sup>0</sup>		1,850		1,750			
						1	1,775	2,375	2,125	2,300			
						2 x 180 <sup>0</sup>		2,550		2,400			
1.6 m/s	4	320 kg	825	1,100	700		1	1,325	1,350				
							2 x 180 <sup>0</sup>		1,500				
	6	450 kg	1,000	1,250	800	♿	1	1,475	1,500	1,725	1,450		
							2 x 180 <sup>0</sup>		1,650		1,550		
	8	630 kg	1,100	1,400	900		1	1,625	1,675	1,925	1,625		
							2 x 180 <sup>0</sup>		1,850		1,750		
	10	800 kg	1,350	1,400	900	♿	1	1,850	1,675	1,925	1,625	1,120	3,550
							2 x 180 <sup>0</sup>		1,850		1,750		
13	1,000 kg	1,600	1,400	1,000		1	2,100	1,675	2,175	1,625			
						2 x 180 <sup>0</sup>		1,850		1,750			
						1	1,775	2,375	2,125	2,300			
						2 x 180 <sup>0</sup>		2,550		2,400			

- 1 Accessible space below the pit (counterweight with safety gear) add 115 mm to AH
- 2 Shaft depth with door tracks projecting 60 mm on the landing
- 3 Shaft depth with door tracks projecting 40 mm on the landing

- 4 HF reduced pit optional 830 mm
- 5 Minimum HUP for internal car height (HC) of 2,100 mm (HUP=HC+1,300)  
HF reduced pit optional (HUP=HC+900) Consult availability of car dimensions

\* Minimum plumb measurements

## Layout



## Customised car dimensions

Car depth										Car width																												
										13	12									1,600																		
										13	13	11								1,500																		
										13	13	12	11	10						1,400																		
										13	12	11	10	9	8					1,300																		
										13	13	12	11	10	9	8	7	6	5	6									1,200									
13	13	12	11	11	10	9	8	8	7	6	5	5	4	5	4	4									1,100													
12	12	11	10	10	9	8	7	7	6	5	5	4	4	4	4									1,000														
11	10	10	9	8	8	7	7	6	5	5	4	4	4	4	4									900														
										6	6	5	5	4	4										800													
																				600	700	800	900	1000	1100	1200	1300	1400	1500									

Note: Car width and depth variable in increments of 5 mm.

For simplification, table samples show increments of 100 mm.

# Orona 3G 2015

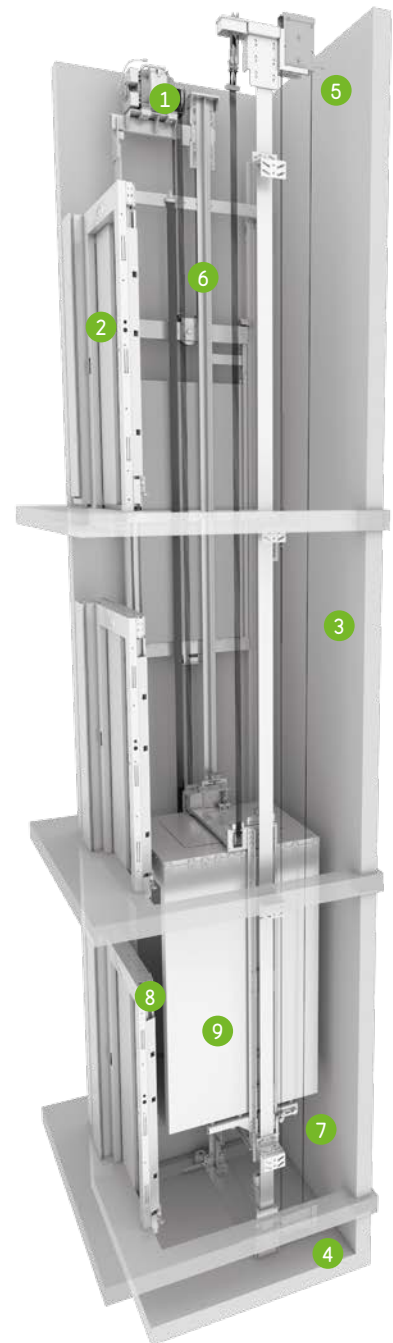
## Machine-room-less electrical gearless solutions (MRLG)

High efficiency for public buildings.  
Maximum durability, comfort, and reliability.  
The customised solution.  
Maximum flexibility and performance.

### General specifications

Load	320 to 1,000 kg
Capacity	4 to 13 persons
Speed	1 - 1.6 m/s
Maximum travel	50 - 60 m
Maximum floors served	16 - 21 floors
Entrances	1 front / 2 open through
Drive system	Direct gearless
Controller	ARCA II controller, low energy microprocessor
Door types	Automatic side-opening / Automatic central-opening
Clear door opening	From 800 to 1,500 mm (in 100 mm increments)
Door height	2,000 / 2,100 / 2,200 / 2,300
Car dimensions	Parametric car dimensions
Internal car height	2,100 / 2,200 / 2,300 / 2,400
Aesthetic solutions	PR1 / PR2 / PR3 / PR4 / PR5 PS1 / PS2 / PS3 / PS4 / PS5 / PS6 / PS7 / PS8 / PS9 / Orona 3G Public Plus

Standard Optional



#### 1 DRIVE

Compact, quiet, gearless, energy efficient, speed regulated (VVVF) permanent magnet electric motor.



#### 2 SOLID DOORS

Extra robust doors with reduced sound levels inside and outside the lift and which are specially constructed for high volume passenger traffic.



#### 3 PARAMETRIC/FLEXIBLE

Flexible car and door configurations ensure available shaft dimensions can be optimised (optional).



#### 4 ACCESSIBLE SPACE BELOW THE PIT

Adapts the lift to suit buildings which have an accessible space below the pit (optional).



#### 5 REDUCED HEADROOM

Optional feature to allow the reduction of the shaft headroom when required, whilst maintaining the maximum safety and protection for maintenance staff.



#### 6 TRACTION ROPES

Orona small diameter ropes replace traditional steel ropes. As a result of their lighter weight, longer lifespan and greater flexibility, it is possible to use a more compact, efficient and eco-friendly gearless machine.



#### 7 SHAFT USABILITY

Lifts designed especially to use all the shaft space available, obtaining a good relation between the space available and the number of passengers to be transported.



#### 8 AUTOMATIC RESCUE SYSTEM

With floor level indication to ensure fast, efficient and safe evacuation of passengers in the event of an emergency. As an option, the system can incorporate a fully-automatic rescue device to evacuate passengers in the event of a power failure.



#### 9 TWO-WAY COMMUNICATIONS

Between the lift and the emergency 24-hour Service Call Centre according to EN 81-28.



ECO-EFFICIENCY



ADAPTABILITY



DESIGN AND ACCESSIBILITY



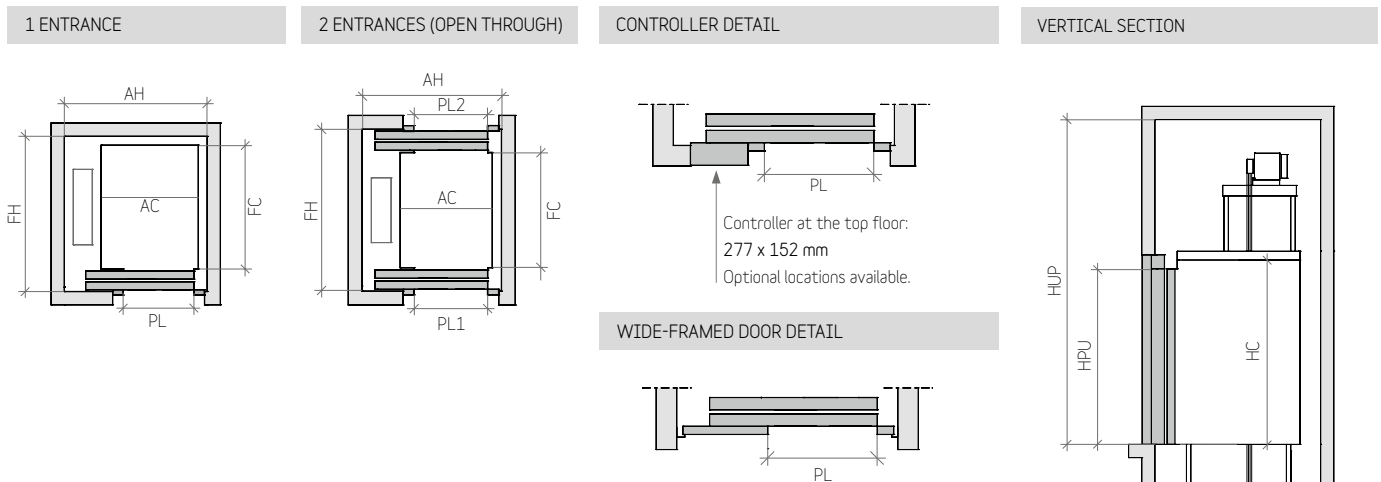
CONTROL AND SAFETY

## Standard dimensions

Load/Capacity			Car			Lift shaft*							
Speed	Persons	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		Side-opening doors		Central-opening doors		HF Pit	HUP Last floor
						Accessibility	No. of entrances	AH <sup>1</sup> Width	FH <sup>2</sup> Depth	AH Width	FH <sup>3</sup> Depth		
1 m/s	4	320 kg	825	1,100	700		1	1,300	1,350			1,000 (830) <sup>4</sup>	3,400 (3,050) <sup>5</sup>
							2 x 180 <sup>0</sup>	1,500	1,500				
	6	450 kg	1,000	1,250	600	♿	1	1,450	1,500	1,725	1,450		
							2 x 180 <sup>0</sup>	1,650	1,650	1,750	1,550		
	8	630 kg	1,100	1,400	900		1	1,600	1,675	1,925	1,625		
							2 x 180 <sup>0</sup>	1,850	1,850	1,925	1,750		
						♿	1	1,825	1,675	1,925	1,625		
							2 x 180 <sup>0</sup>	1,850	1,850	1,925	1,750		
							1	2,075	1,675	2,150	1,625		
							2 x 180 <sup>0</sup>	1,850	1,850	2,150	1,750		
							1	1,775	2,375	2,125	2,300		
							2 x 180 <sup>0</sup>	2,550	2,550	2,125	2,400		
1.6 m/s	4	320 kg	825	1,100	700		1	1,325	1,350			1,120	3,550
							2 x 180 <sup>0</sup>	1,500	1,500				
	6	450 kg	1,000	1,250	800	♿	1	1,475	1,500	1,725	1,450		
							2 x 180 <sup>0</sup>	1,650	1,650	1,925	1,550		
	8	630 kg	1,100	1,400	900		1	1,625	1,675	1,925	1,625		
							2 x 180 <sup>0</sup>	1,850	1,850	1,925	1,750		
						♿	1	1,850	1,675	1,925	1,625		
							2 x 180 <sup>0</sup>	1,850	1,850	1,925	1,750		
							1	2,100	1,675	2,175	1,625		
							2 x 180 <sup>0</sup>	2,100	1,850	2,175	1,750		
							1	1,775	2,375	2,125	2,300		
							2 x 180 <sup>0</sup>	2,550	2,550	2,125	2,400		

- 1 Accessible space below the pit (counterweight with safety gear) add 115 mm to AH
  - 2 Shaft depth with door tracks projecting 60 mm on the landing
  - 3 Shaft depth with door tracks projecting 40 mm on the landing
  - 4 HF reduced pit optional 830 mm
  - 5 Minimum HUP for interior car height (HC) of 2,100 mm (HUP = HC + 1,300)  
HUP optional reduced (HUP = HP + 900). Consult availability of car dimensions.
- \* Minimum plumb measurements

## Layout



## Customised car dimensions

						Car width														
					13	12														
					13	13	11													
				13	13	12	11	10												
				13	12	11	10	9	8											
			13	13	12	11	10	9	9	8										
	13	13	12	11	11	10	9	8	8											
	12	12	11	10	10	9	8													
	11	10	10	9	8	8														
	2,100	2,000	1,900	1,800	1,700	1,600	1,500	1,400	1,300	1,200										
	Car depth										800	900	1,000	1,100	1,200	1,300	1,400	1,500		
																				Clear door opening

Note: Car width and depth variable in increments of 5 mm.  
For simplification, table samples show increments of 100 mm.

Orona 3G

2016

## Machine-room-less electrical gearless solutions (MRLG)

High efficiency for public buildings.

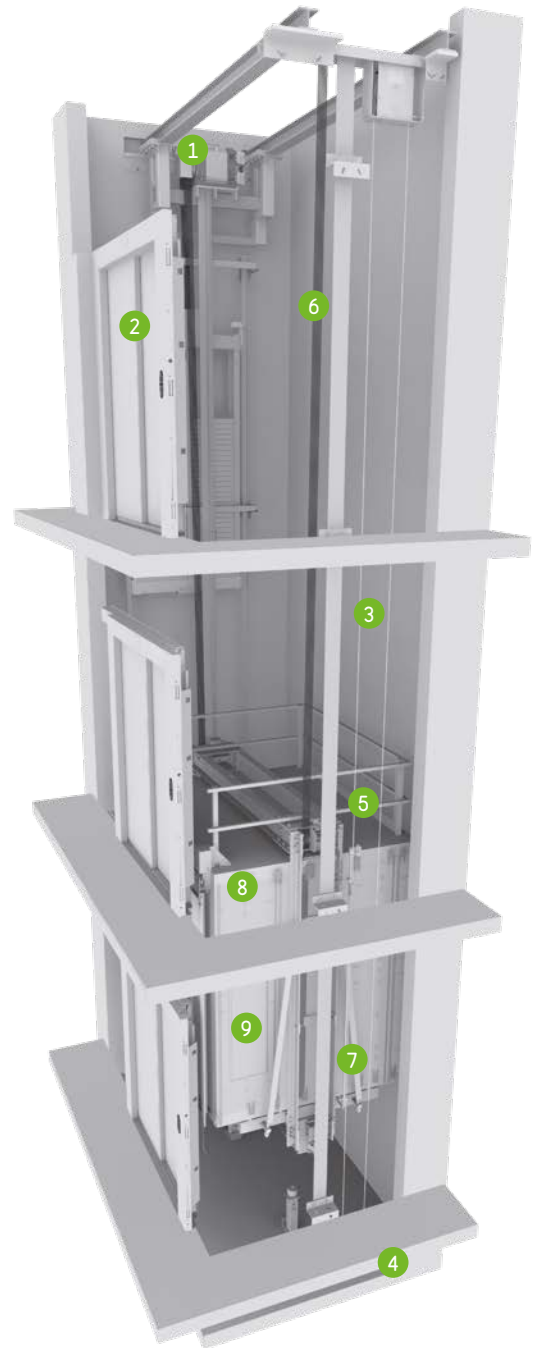
Maximum durability, comfort, and reliability.

The solution with maximum robustness and comfort for the most demanding environments and specifications.

### General specifications

Load	630 to 1,600 kg
Capacity	8 to 21 persons
Speed	1 - 1.6 m/s
Maximum travel	50 - 75 m
Maximum floors served	32 floors
Entrances	1 front / 2 open through
Drive system	Direct gearless
Controller	ARCA II controller, low energy microprocessor
Door types	Automatic side-opening / Automatic central-opening
Clear door opening	From 800 to 1,600 mm (in 100 mm increments)
Door height	2,000 / 2,100 / 2,200 / 2,300
Car dimensions	Parametric car dimensions
Internal car height	2,100 / 2,200 / 2,300 / 2,400
Aesthetic solutions	PR1 / PR2 / PR3 / PR4 / PR5 PS1 / PS2 / PS3 / PS4 / PS5 / PS6 / PS7 / PS8 / PS9 / Orona 3G Public Plus

Standard Optional



#### 1 DRIVE

Compact, quiet, gearless, energy efficient, speed regulated (VVVF) permanent magnet electric motor.



#### 2 SOLID DOORS

Extra robust doors with reduced sound levels inside and outside the lift and which are specially constructed for high volume passenger traffic.



#### 3 PARAMETRIC/FLEXIBLE

Flexible car and door configurations ensure available shaft dimensions can be optimised (optional).



#### 4 ACCESSIBLE SPACE BELOW THE PIT

Adapts the lift to suit buildings which have an accessible space below the pit (optional).



#### 5 ROBUST LIFT CAR

Provides greater comfort during lift travel, with reduced vibration and noise.



#### 6 TRACTION ROPES

Orona small diameter ropes replace traditional steel ropes. As a result of their lighter weight, longer lifespan and greater flexibility, it is possible to use a more compact, efficient and eco-friendly gearless machine.



#### 7 CARS

Reinforced wall panels and flooring provides durability for heavy duty usage. Flexible configurations offering optimum car and door dimensions.



#### 8 AUTOMATIC RESCUE SYSTEM

With floor level indication to ensure fast, efficient and safe evacuation of passengers in the event of an emergency. As an option, the system can incorporate a fully-automatic rescue device to evacuate passengers in the event of a power failure.



#### 9 TWO-WAY COMMUNICATIONS

Between the lift and the emergency 24-hour Service Call Centre according to EN 81-28.



ECO-EFFICIENCY



ADAPTABILITY



DESIGN AND ACCESSIBILITY



CONTROL AND SAFETY

## Standard dimensions

Load/Capacity			Car			Lift shaft*									
Speed	Persons	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		Side-opening doors		Central-opening doors		HF Pit	HUP <sup>4</sup> Last floor		
						Accessibility	No. of entrances	AH <sup>1</sup> Width	FH <sup>2</sup> Depth	AH Width	FH <sup>3</sup> Depth				
1 m/s	8	630 kg	1,100	1,400	900		1	1,700	1,675	1,950	1,625	1,050	3,550		
							2 x 180 <sup>0</sup>		1,850		1,750				
	10	800 kg	1,350	1,400	900	♿	1	1,975	1,675	1,975	1,625				
							2 x 180 <sup>0</sup>		1,850		1,750				
	13	1,000 kg	1,600	1,400	1,000		1	2,225	1,675	2,225	1,625				
				1,100	2,100		1,000		2 x 180 <sup>0</sup>		1,850			1,750	
17	1,275 kg	1,200	2,300	1,100	♿	1	1,935	2,375							
						2 x 180 <sup>0</sup>		2,550					2,600	2,750	
21	1,600 kg	1,700	1,950	1,000	♿	1			2,450		2,200	1,150	3,600		
			1,400	2,400		1,200					2 x 180 <sup>0</sup>			2,850	2,300
1.6 m/s	8	630 kg	1,100	1,400	900	♿	1	1,725	1,675	1,950	1,625	1,200	3,700		
							2 x 180 <sup>0</sup>		1,850		1,750				
	10	800 kg	1,350	1,400	900	♿	1	1,975	1,675	1,975	1,625				
							2 x 180 <sup>0</sup>		1,850		1,750				
	13	1,000 kg	1,600	1,400	1,000		1	2,225	1,675	2,225	1,625				
				1,100	2,100		1,000		2 x 180 <sup>0</sup>		1,850			1,750	
	17	1,275 kg	1,200	2,300	1,100	♿	1	1,775	2,375						
							2 x 180 <sup>0</sup>		2,550					2,600	2,750
	21	1,600 kg	1,700	1,950	1,000	♿	1			2,450		2,200	1,250	3,750	
				1,400	2,400		1,200					2 x 180 <sup>0</sup>			2,850
							1	2,085	2,700						
						2 x 180 <sup>0</sup>	2,850								

1 Accessible space below the pit (counterweight with safety gear) add 50 mm to AH

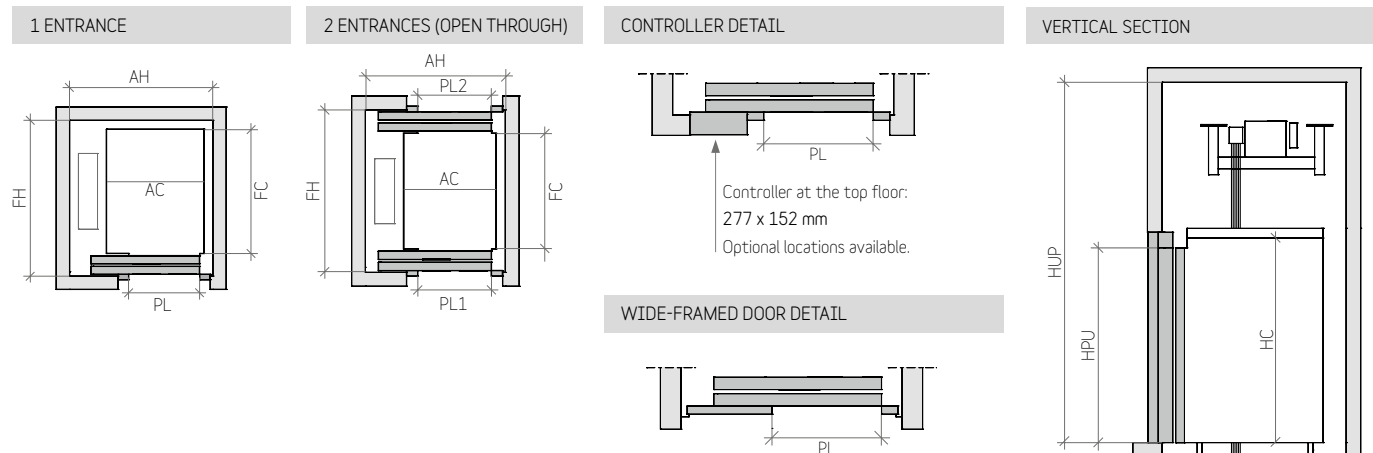
2 Shaft depth with door tracks projecting 60 mm on the landing

3 Shaft depth with door tracks projecting 40 mm on the landing

4 Minimum HUP for internal car height (HC) of 2,100 mm.

\* Minimum plumb measurements

## Layout



## Customised car dimensions

Car width		Car depth												
										21	20	18		2,100
										21	20	18	17	2,000
					21	20	19	17	16					1,900
					21	20	19	18	16	15				1,800
					21	20	19	18	16	15	14			1,700
												12		1,600
		21	21	19	18	17	17	15	14	13	13	11		1,500
21	21	20	19	18	17	16	15	14	13	13	12	11	10	1,400
20	19	18	17	16	16	15	14	13	12	11	10	9	8	1,300
19	18	17	16	15	14	13	13	12	11	10	9	9	8	1,200
														1,100
														1,000
														900
2,500	2,400	2,300	2,200	2,100	2,000	1,900	1,800	1,700	1,600	1,500	1,400	1,300	1,200	800
														900
														1,000
														1,100
														1,200
														1,300
														1,400
														1,500
														1,600

Note: Car width and depth variable in increments of 5 mm.

For simplification, table samples show increments of 100 mm.