



Orona

Orona 3G

Technical Solutions



Orona

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Orona 3G

Technical

Solutions

MACHINE-ROOM-LESS ELECTRICAL GEARLESS SOLUTIONS (MRLG)

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Features

Machine-room-less
electrical gearless
solutions (MRLG)

Orona 3G
X-10



Orona 3G
X-11



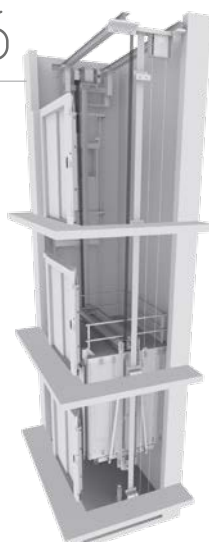
Orona 3G
X-14



Orona 3G
X-15



Orona 3G
X-16

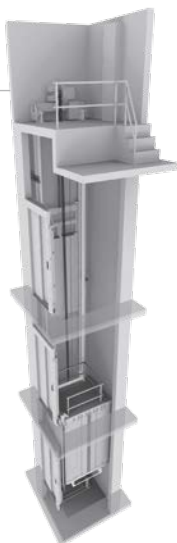


Orona 3G
X-18



Machine-room above
electrical gearless
solutions

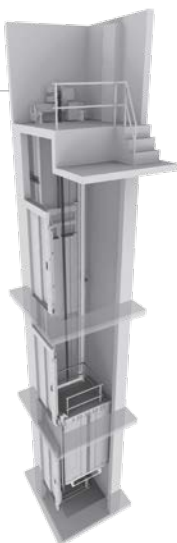
Orona 3G
X-20



Orona 3G
X-23



Orona 3G
X-24



Orona 3G
X-25



Orona 3G
X-26



Orona 3G
X-27

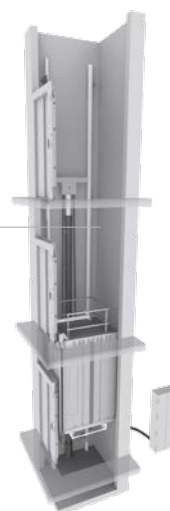


Orona 3G
X-28



Hydraulic drive
solutions

Orona 3G
X-30



Orona 3G X-10

Machine-room-less electrical gearless solutions (MRLG)

High efficiency for residential and public buildings for medium traffic.

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

The standard 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 connections / 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	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G 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 BELOW THE PIT

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



4 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.



5 DRIVE

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



6 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infra red door protection edges. Optional Solid Door for high flow situations.



7 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 ¹ Width	FH ² Depth	AH Width	FH ³ Depth		
4	320 kg	825	1,100	700		1	1,325	1,350	1,600	1,300	1,000 (850) ⁴	3,400
						2 x 180°		1,500		1,400		
						2 x 90°	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) ⁵
						2 x 180°		1,650		1,550		3,400
						2 x 90°	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) ⁵
						2 x 180°		1,800		1,700		3,400
						2 x 90°	1,725	1,650				3,400
		1,200	1,250	900		1	1,700	1,500	2,000	1,450		3,400
						2 x 180°		1,650		1,550		3,400
						2 x 90°	1,825	1,575				3,400

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

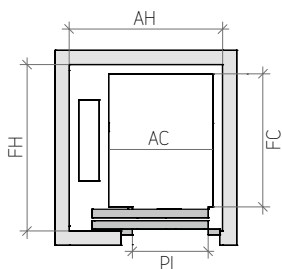
5 HUP minimum for internal car height (HC) of 2,100 mm (HUP = HC + 1,300)

HUP reduced headroom optional only for 6 and 8 persons (HUP = HC + 900)

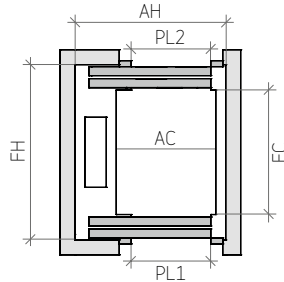
* Minimum plumb measurements

Layout

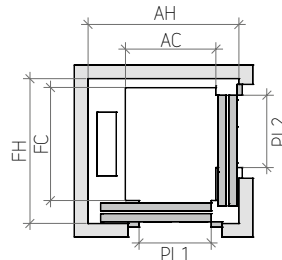
1 ENTRANCE



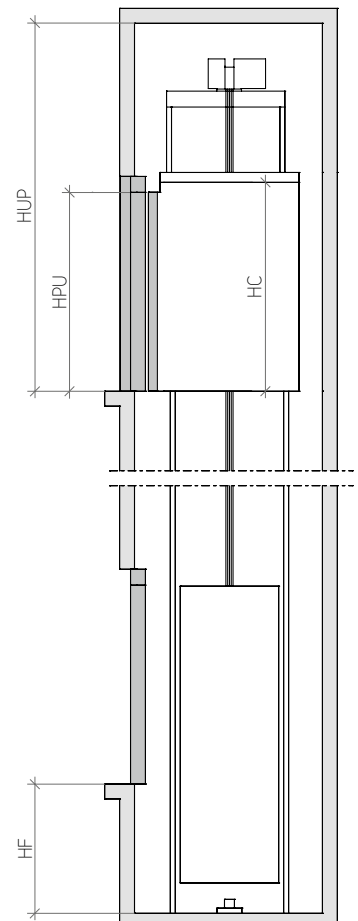
2 ENTRANCES (OPEN THROUGH)



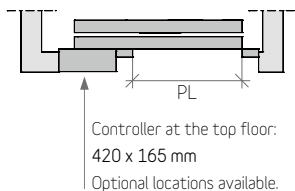
2 ENTRANCES (FRONT & SIDE)



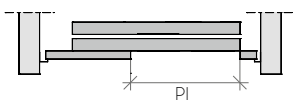
VERTICAL SECTION



CONTROLLER DETAIL



WIDE-FRAMED DOOR DETAIL



Orona 3G

X-11

Machine-room-less electrical gearless solutions (MRLG)

Compact machine-room-less solutions mainly designed for existing buildings. Latest direct drive technology for measurements on top floor and pit limit. Optimum use of space, machine-room-less solution.

General specifications

Load	180 to 630 kg
Capacity	2 to 8 persons
Speed	0.6 - 1 m/s
Maximum travel	45 m
Maximum floors served	16 floors
Entrances	1 front / 2 open through / 2 front and side
Drive system	Direct gearless
Controller	ARCA II controller, low energy microprocessor
Door types	Semiautomatic + Articulated (BUS) / Automatic side-opening / Automatic central-opening
Clear door opening	From 500 to 900 mm
Door height	2,000 / 2,100
Car dimensions	Parametric car dimensions
Internal car height	2,100 / 2,200
Aesthetic solutions	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G 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 BELOW THE PIT

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



4 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.



5 DRIVE

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



6 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infra red door protection edges. Optional Solid Door for high flow situations.







7 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			Lift shaft*														
			Standard car			Entrances	Doors side jack				Doors rear jack		HF Pit			HUP ² Last Floor	
							Telescopic Doors				Central Doors HH		Std.	Reduced		Std.	Reduced
	 Persons	Q Load	AC Width	FC Depth	PL Clear opening	No. of entrances	AH ¹ Width	FH ¹ Depth	TT	NN	AH ¹ Width	FH ¹ Depth		With safety space	Without safety space (EN 81-21)		
	4	320 kg	825	1,100	700	1	1,300	1,450		X	1,200	1,705	1,000	710	260	3,520	2,700
						2 x 180 ⁰	1,300	1,500		X							
						2 x 90 ⁰	1,430	1,450		X							
	6	450 kg	1,000	1,250	800	1	1,475	1,600		X	1,350	1,855					
						2 x 180 ⁰	1,475	1,650		X							
						2 x 90 ⁰	1,605	1,600		X							
	8	630 kg	1,100	1,400	800	1	1,575	1,700	X		1,350	2,005					
						2 x 180 ⁰	1,575	1,850	X								
						2 x 90 ⁰	1,730	1,700	X								

1 Automatic doors projecting 60 mm on the landing (TT or HH) or projecting 105 mm on the landing (NN) (always adapted to space 50 mm).

2 HUP minimum for internal car height (HC) of 2100 mm.

NOTE: All of the examples are calculated with a 90 mm sill on car doors.

TT - Two panel telescopic door

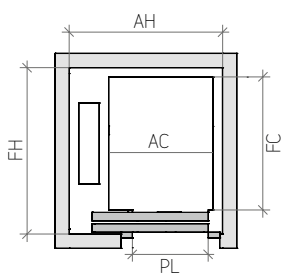
NN - Three panel telescopic door

HH - Four panel central door

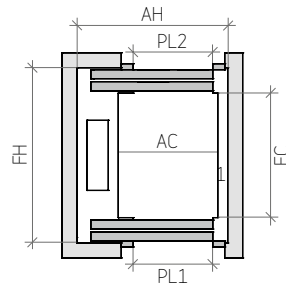
* Minimum plumb measurements

Layout

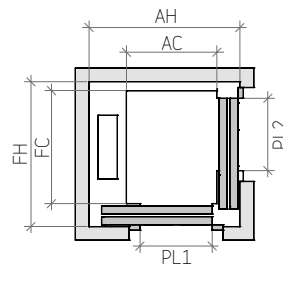
1 ENTRANCE



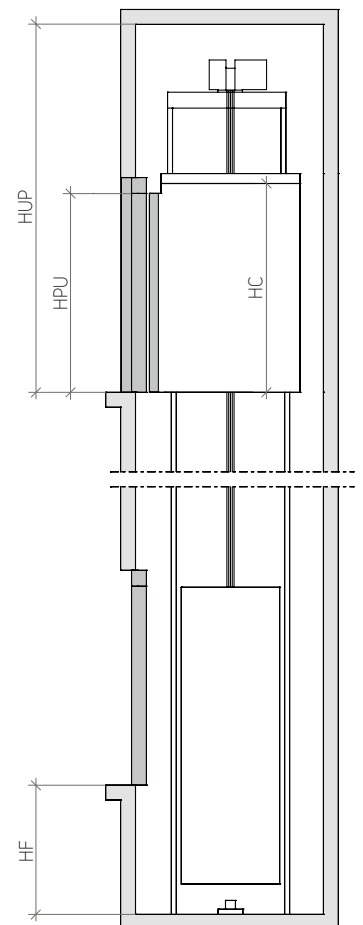
2 ENTRANCES (OPEN THROUGH)



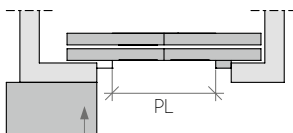
2 ENTRANCES (FRONT & SIDE)



VERTICAL SECTION

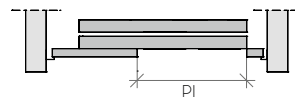


CONTROLLER DETAIL



Controller at the top floor:
700 x 400 mm
Optional locations available.

WIDE-FRAMED DOOR DETAIL



Customised car dimensions

															Car width	
						8	8	8	7	7					1,400	
						8	8	8	7	7					1,350	
						8	8	8	7	7	6	6			1,300	
				8	8	8	7	7	6	6					1,250	
			8	8	8	7	7	6	6	6	5	5	5	4	4	1,200
	8	8	8	8	7	7	6	6	6	5	5	5	4	4	4	1,150
8	8	8	8	7	7	6	6	6	5	5	5	4	4	4	4	1,100
8	8	8	7	7	6	6	6	5	5	5	5	4	4	4		1,050
8	7	7	7	6	6	6	5	5	5	5	4	4	4	4		1,000
	7	7	6	6	6	5	5	5	5	4	4	4	4	3	3	950
	6	6	6		5	5	5	5	4	4	4	3	3	3	3	900
	6	6			5	5	5	4	4	4	3	3	3	3	2	850
					5	4	4	4	4	4	3	3	3	2	2	800
					4	4	4	4	4	3	3	3	3	2	2	750
					4	4	4	4	3	3	3	3	2	2	2	700
					4	4	4	3	3	3	3	2	2	2		650
					3	3	3	3	2	2	2	2				600
1,450*	1,400	1,350	1,300	1,250	1,200	1,150	1,100	1,050	1,000	950	900	850	800	750	700	650

Car depth

Clear door opening

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

* Car depth only valid in the event of side car frame.

Orona 3G

X-14

Machine-room-less electrical gearless solutions (MRLG)

Compact machine-room-less solutions mainly designed for existing buildings.

Latest direct drive technology.

The machine-room-less solution that provides up to 50% increase in the car size.

General specifications

Load	180 to 630 kg
Capacity	2 to 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
Controller	ARCA II controller, low energy microprocessor
Door types	Automatic side-opening / Automatic central-opening / Semiautomatic + Articulated (BUS)
Clear door opening	From 500 to 900 mm
Door height	2,000 / 2,100 / 2,200
Car dimensions	Parametric car dimensions
Internal car height	2,000 / 2,100 / 2,200
Aesthetic solutions	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G Plus

Standard Optional



1 MRL

Compact machine-room-less solution.



2 OPTIMISED PASSENGER UNIT

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



3 ACCESSIBLE SPACE BELOW THE PIT

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



4 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.



5 DRIVE

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



6 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infra red door protection edges. Optional Solid Door for high flow situations.



7 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*											
							Side piston		Rear piston		HF Pit		HUP Last Floor			
							Side-opening doors		Central-opening doors		Std.	Reduced				
	Q Load	AC Width	FC Depth	PL ⁵ Clear opening	Entrances		AH ¹ Width	FH ² Depth	AH ³ Width	FH ² Depth		Std.	With safety space	Without safety space (EN 81-21)	Std. ⁴	
Persons					Accessibility	No. of entrances										
4	320 kg	825	1,100	700		1	1,150	1,300	1,150	1,525	1,000	890	400	3,400		
						2x180 ⁰		1,450								
						2x90 ⁰	1,250	1,300	1,200	1,525						
6	450 kg	1,000	1,250	800		1	1,325	1,450	1,300	1,675						
						2x180 ⁰		1,600								
						2x90 ⁰	1,425	1,450	1,400	1,675						
8	630 kg	1,100	1,400	900		1	1,425	1,600	1,450	1,825						
						2x180 ⁰		1,750								
						2x90 ⁰	1,525	1,600	1,500	1,825						
		1,200	1,250	900		1	1,525	1,450	1,450	1,675						
						2x180 ⁰		1,600								
						2x90 ⁰	1,625	1,450	1,500	1,675						

1 Accessible space below the pit (counterweight with safety gear) or reduced pit without safety space add 40 mm to AH
AH calculated for NN 3 panel telescopic door

2 Shaft depth with door tracks projecting as a whole on the landing

3 Width calculated for 4 panel central door

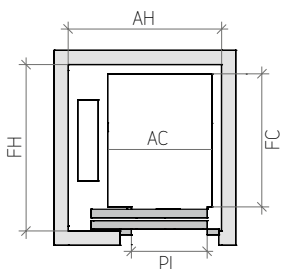
4 HUP minimum for internal car height (HC) 2,100 mm

5 Door restrictions may exist for pits without safety space EN 81-21

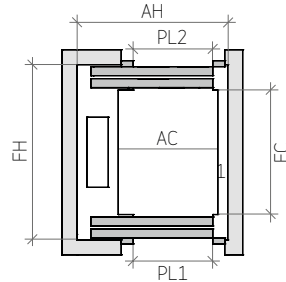
* Minimum plumb measurements

Layout

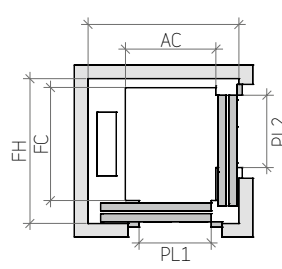
1 ENTRANCE



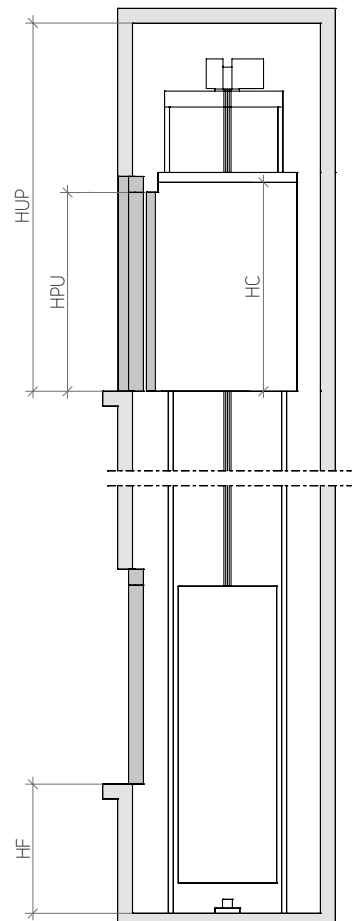
2 ENTRANCES (OPEN THROUGH)



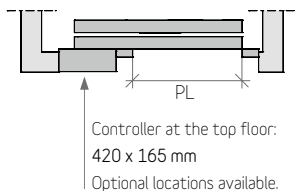
2 ENTRANCES (FRONT & SIDE)



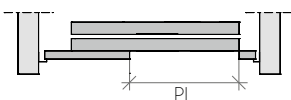
VERTICAL SECTION



CONTROLLER DETAIL



WIDE-FRAMED DOOR DETAIL



Orona 3G

X-15

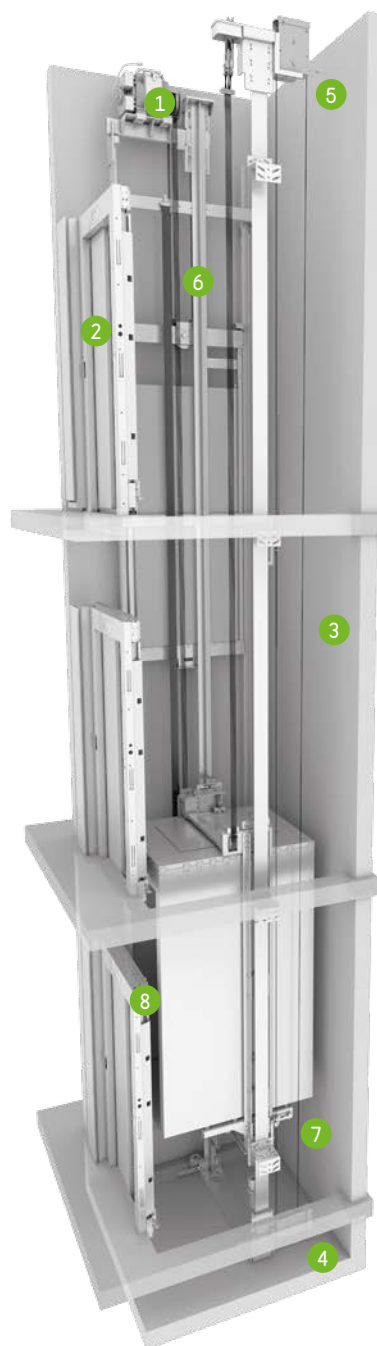
Machine-room-less electrical gearless solutions (MRLG)

High efficiency for residential and public buildings.
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	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G 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 full height infra red door protection edges. 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.

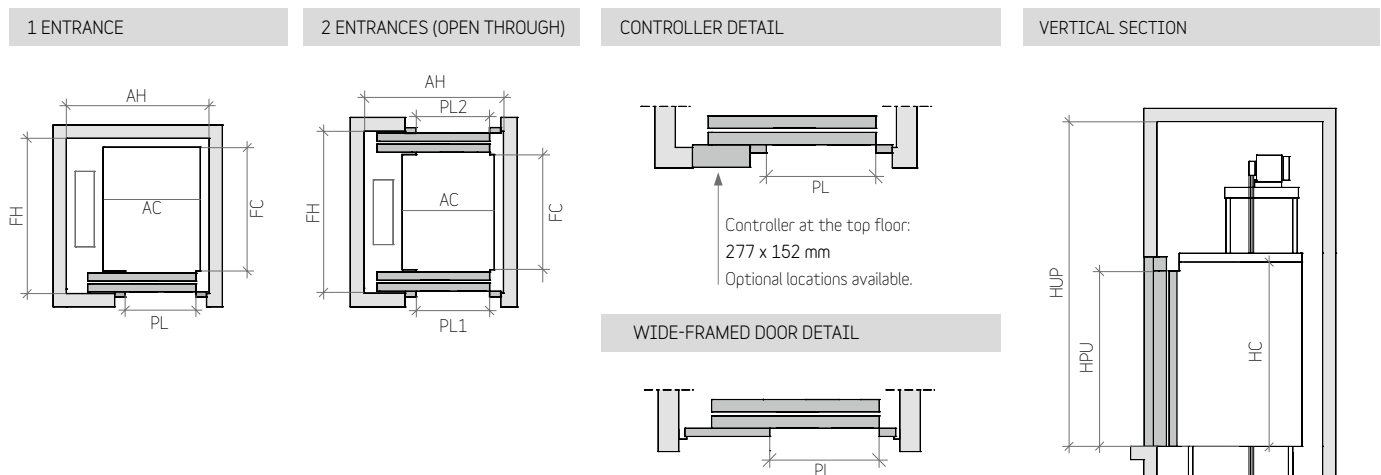


Standard dimensions

Load / capacity			Car			Lift shaft*										
								Side-opening doors		Central-opening doors						
Speed		Q Load	AC Width	FC Depth	PL Clear opening	Entrances		AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth	HF Pit	HUP Last Floor			
						Accessibility	No. of entrances									
1 m/s	4	320 kg	825	1100	700		1 2 x 180 ⁰	1,300	1,350 1,500			1,000 (830) ⁴	3,400 (3050) ⁵			
	6	450 kg	1,000	1250	800		1 2 x 180 ⁰	1,450	1,500 1,650	1,725	1,450 1,550					
	8	630 kg	1,100	1,400	900		1 2 x 180 ⁰	1,600	1,675 1,850	1,925	1,625 1,750					
	10	800 kg	1,350	1,400	900		1 2 x 180 ⁰	1,825	1,675 1,850	1,925	1,625 1,750					
	13	1,000 kg	1,600	1,400	1,000		1 2 x 180 ⁰	2,075	1,675 1,850	2,150	1,625 1,750					
			1,100	2,100	1,000		1 2 x 180 ⁰	1,775	2,375 2,550	2,125	2,300 2,400					
	1.6 m/s	4	320 kg	825	1,100		700		1 2 x 180 ⁰	1,325	1,350 1,500					1,120
		6	450 kg	1,000	1,250	800		1 2 x 180 ⁰	1,475	1,500 1,650	1,725			1,450 1,550		
8		630 kg	1,100	1,400	900		1 2 x 180 ⁰	1,625	1,675 1,850	1,925	1,625 1,750					
10		800 kg	1,350	1,400	900		1 2 x 180 ⁰	1,850	1,675 1,850	1,925	1,625 1,750					
13		1,000 kg	1,600	1,400	1,000		1 2 x 180 ⁰	2,100	1,675 1,850	2,175	1,625 1,750					
			1,100	2,100	1,000		1 2 x 180 ⁰	1,775	2,375 2,550	2125,	2,300 2,400					

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

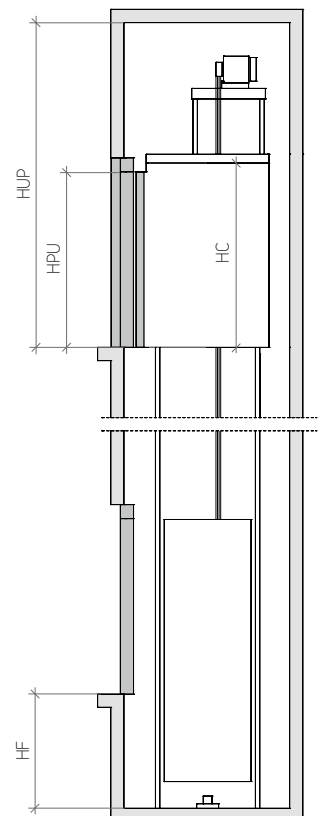
Layout



Customised car dimensions

													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	9	8			6	1,200										
13	13	12	11	11	10	9	8	8	7	6	5		1,100										
12	12	11	10	10	9	8	7	7	6	5	5		1,000										
11	10	10	9	8	8	7	7	6	5	5	4		900										
						6	6	5	5	4	4		800										
2,100 2,000 1,900 1,800 1,700 1,600 1,500 1,400 1,300 1,200 1,100 1,000														600	700	800	900	1,000	1,100	1,200	1,300	1,400	1,500
Car depth													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

X-16

Machine-room-less electrical gearless solutions (MRLG)

High efficiency for public buildings.

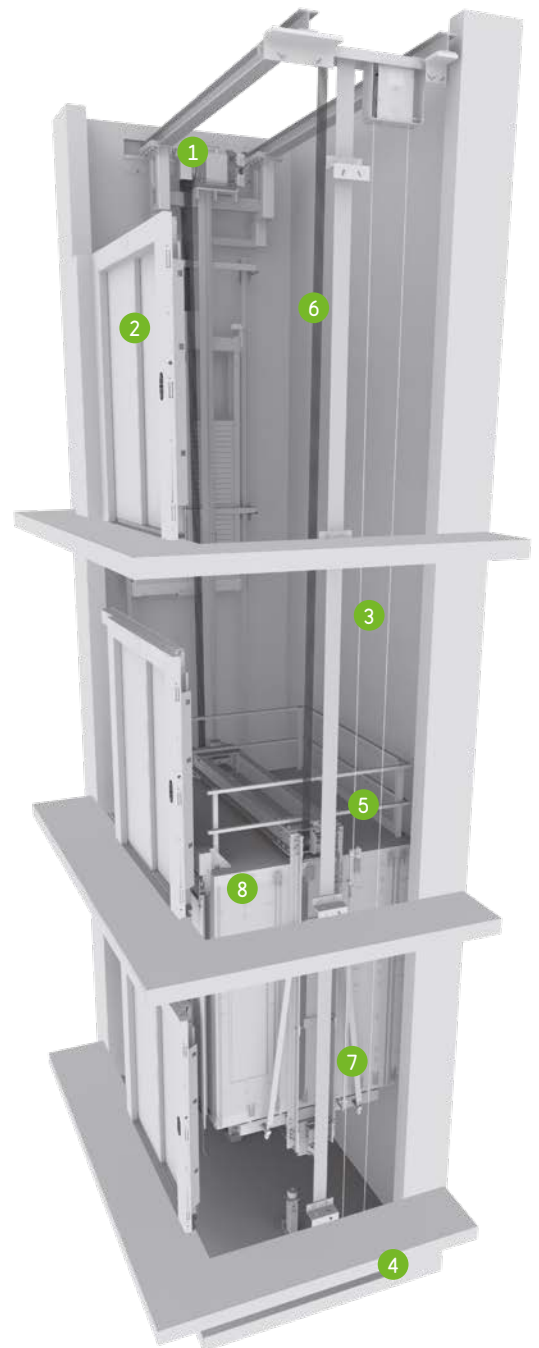
Maximum reliability.

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	Orona 3G Public Packs / 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.



ECO-EFFICIENCY



ADAPTABILITY









DESIGN AND ACCESSIBILITY



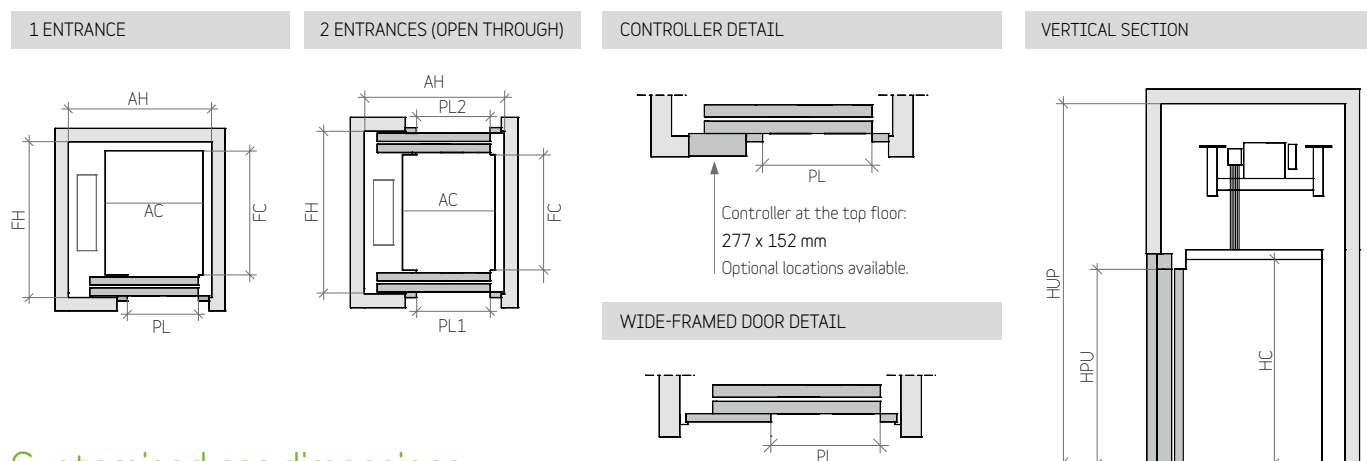
CONTROL AND SAFETY

Standard dimensions

Load / capacity				Car			Lift shaft*						
							Side-opening doors		Central-opening doors				
Speed			Q Load	AC Width	FC Depth	PL Clear opening	No. of entrances	AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth	HF Pit	HUP ⁴ Last Floor
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 ⁰		1,850		1,750		
		10	800 kg	1,350	1,400	900	1	1,975	1,675	1,975	1,625		
							2 x 180 ⁰		1,850		1,750		
		13	1,000 kg	1,600	1,400	1,000	1	2,225	1,675	2,225	1,625		
							2 x 180 ⁰		1,850		1,750		
		17	1,275 kg	1,200	2,300	1,100	1	1,935	2,600			1,150	3,600
							2 x 180 ⁰		2,750				
		21	1,600 kg	1,700	1,950	1,000	1		2,200	2,300			
							2 x 180 ⁰						
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 ⁰		1,850		1,750		
		10	800 kg	1,350	1,400	900	1	1,975	1,675	1,975	1,625		
							2 x 180 ⁰		1,850		1,750		
		13	1,000 kg	1,600	1,400	1,000	1	2,225	1,675	2,225	1,625		
							2 x 180 ⁰		1,850		1,750		
		17	1,275 kg	1,200	2,300	1,100	1	1,935	2,600			1,250	3,750
							2 x 180 ⁰		2,750				
		21	1,600 kg	1,700	1,950	1,000	1		2,200	2,300			
							2 x 180 ⁰						
						1	2,085	2,700					
						2 x 180 ⁰		2,850					

- | | |
|---|--|
| 1 Accessible space below the pit (counterweight with safety gear) add 50 mm to AH | 4 HUP minimum for internal car height (HC) 2,100 mm. |
| 2 Shaft depth with door tracks projecting 60 mm on the landing | * Minimum plumb measurements |
| 3 Shaft depth with door tracks projecting 40 mm on the landing | |

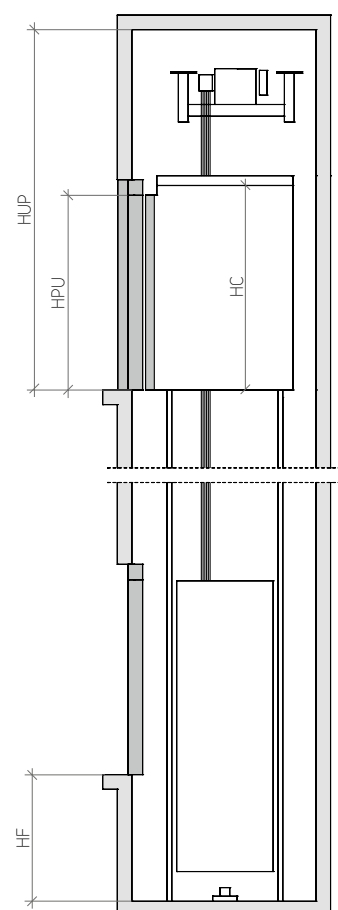
Layout



Customised car dimensions

[illegible]

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



Orona 3G

X-18

Machine-room-less electrical gearless solutions (MRLG)

High efficiency for public buildings.

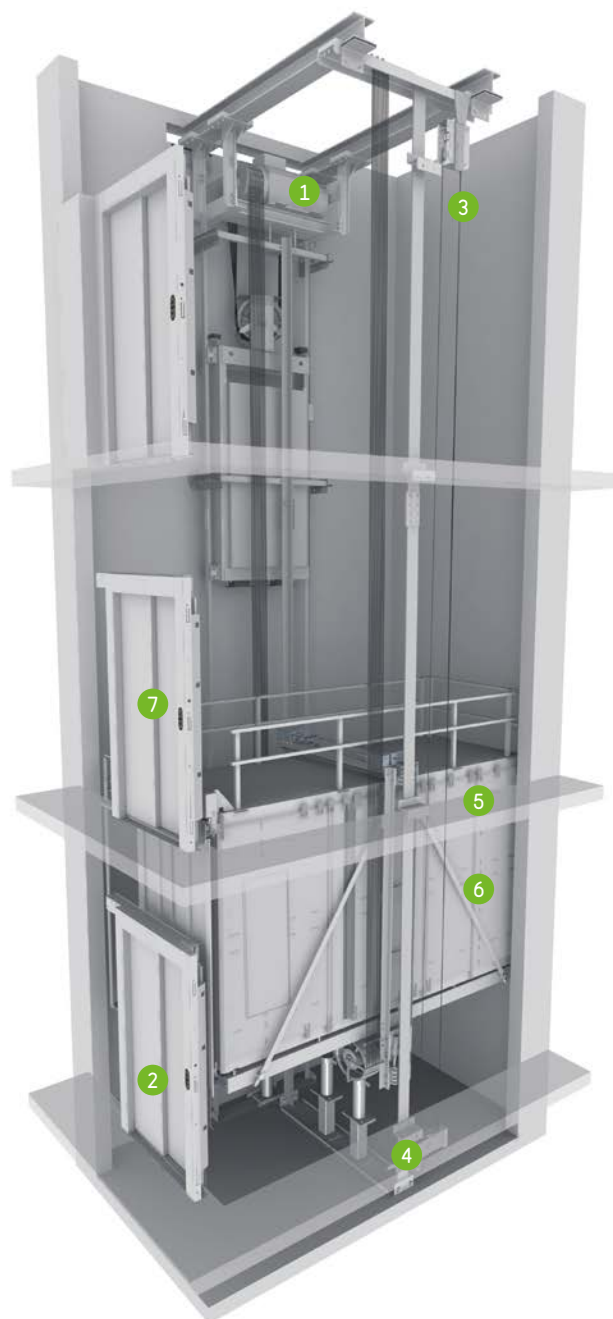
Maximum durability, comfort, and reliability.

The high transport capacity and dimensional flexibility solution for all types of loads.

General specifications

Load	1,650 to 2,500 kg
Capacity	22 to 33 persons
Speed	0.6 - 1 - 1.6 m/s
Maximum travel	50 - 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 900 to 2,500 mm (in increments of 100 mm)
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	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 CARS

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








7 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*					
Speed		 Persons	Q Load	AC Width	FC Depth	PL Clear opening	Type	No. of entrances	AH ¹ Width	FH Depth	HF ² Pit	HUP ³ Last Floor	
0.6 m/s		24	1,800 kg	2,350	1,600	1,200	CC	1 2 x 180°	3,150	1,950 2,160	1,450	3,625	
		26	2,000 kg	2,350	1,700	1,200	CC	1 2 x 180°	3,150	2,050 2,260			
				1,500	2,700	1,300	TT	1 2 x 180°	2,300	3,050 3,260			
		33	2,500 kg	1,800	2,700	1,300	TT	1 2 x 180°	2,600	3,050 3,260			
								3,050 3,260					
1 m/s		24	1,800 kg	2,350	1,600	1,200	CC	1 2 x 180°	3,150	1,950 2,160	1,450	3,650	
		26	2,000 kg	2,350	1,700	1,200	CC	1 2 x 180°	3,150	2,050 2,260			
				1,500	2,700	1,300	TT	1 2 x 180°	2,300	3,050 3,260			
		33	2,500 kg	1,800	2,700	1,300	TT	1 2 x 180°	2,600	3,050 3,260			
								3,050 3,260					
1.6 m/s		24	1,800 kg	2,350	1,600	1,200	CC	1 2 x 180°	3,150	2,050 2,260	1,600	3,790	
		26	2,000 kg	2,350	1,700	1,200	CC	1 2 x 180°	3,150	2,050 2,260			
				1,500	2,700	1,300	TT	1 2 x 180°	2,300	3,050 3,260			
		33	2,500 kg	1,800	2,700	1,300	TT	1 2 x 180°	2,600	3,050 3,260			
								3,050 3,260					

1 With 2 panel telescopic doors

2 With PVC flooring. Marble floor option + 20 mm

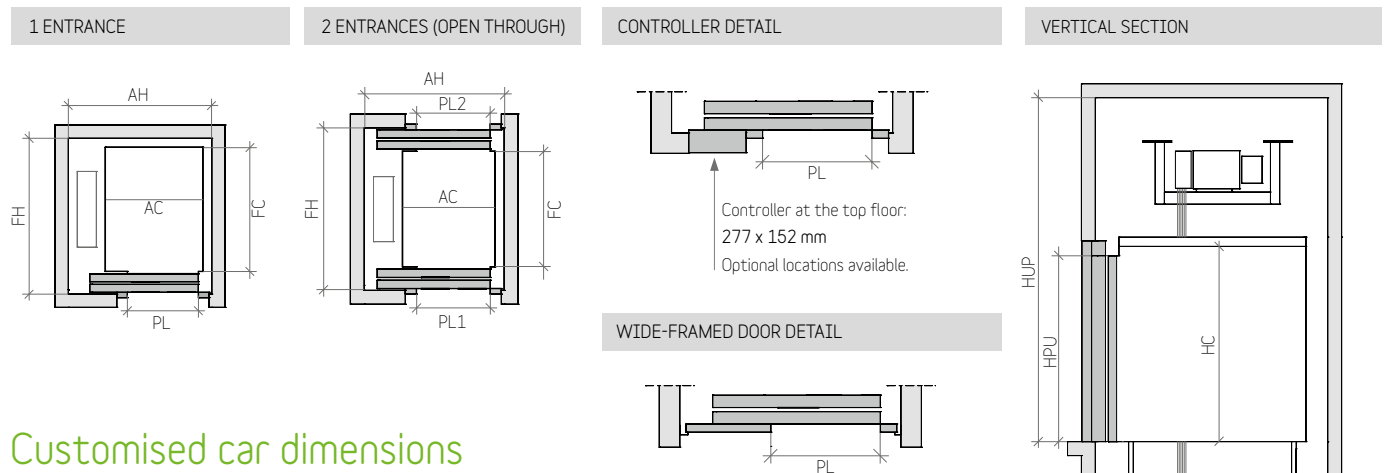
3 HUP minimum for internal car height (HC) of 2,100 mm

CC - Two panel central door

TT - Two panel telescopic door

* Minimum plumb measurements

Layout



Customised car dimensions

		Car width																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																				
Car depth	3,000															33	2,900																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																					</

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

For simplification, table samples show increments of 100 mm.

Orona 3G X-20

Machine-room above electrical gearless solutions

High efficiency for buildings with low traffic.

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

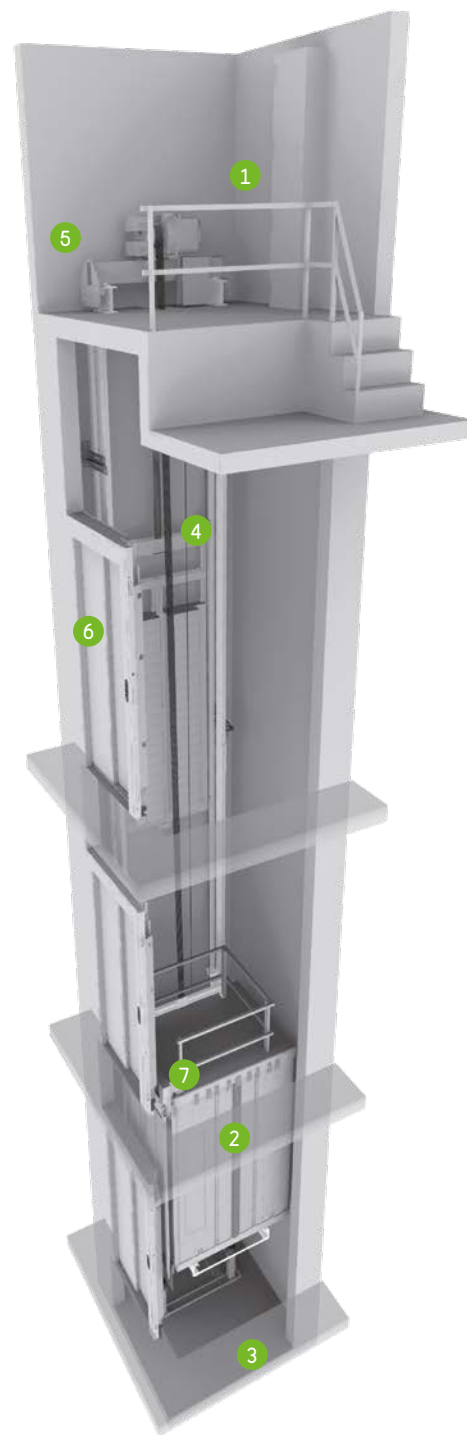
The standard solution.

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
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	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G Plus

Standard Optional



1 MACHINE-ROOM

A traditional solution simplifying lift maintenance.



2 OPTIMISED PASSENGER UNIT

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



3 ACCESSIBLE SPACE BELOW THE PIT

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



4 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.



5 DRIVE

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



6 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infra red door protection edges. Optional Solid Door for high flow situations.







7 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 ¹ Width	FH ² Depth	AH Width	FH ³ Depth		
4	320 kg	825	1,100	700		1	1,325	1,350	1,600	1,300	1,000 (850) ⁴	3,400
						2 x 180 ⁰		1,500		1,400		
						2 x 90 ⁰	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) ⁵
						2 x 180 ⁰		1,650		1,550		
						2 x 90 ⁰	1,625	1,500				
8	630 kg	1,100	1,400	900		1	1,600	1,650	2,000	1,600		3,400 (3,000) ⁵
						2 x 180 ⁰		1,800		1,700		
						2 x 90 ⁰	1,725	1,650				
		1,200	1,250	900		1	1,700	1,500	2,000	1,450		3,400
						2 x 180 ⁰		1,650		1,550		
						2 x 90 ⁰	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

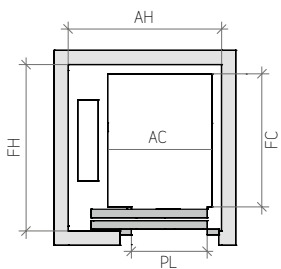
5 HUP minimum for internal car height (HC) of 2,100 mm (HUP = HC + 1,300)

HUP reduced headroom optional only for 6 and 8 persons (HUP = HC + 900)

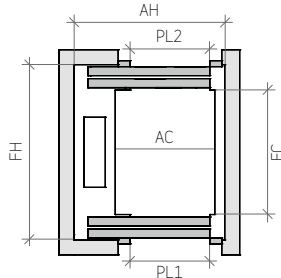
* Minimum plumb measurements

Layout

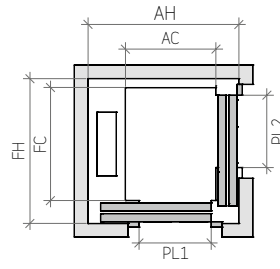
1 ENTRANCE



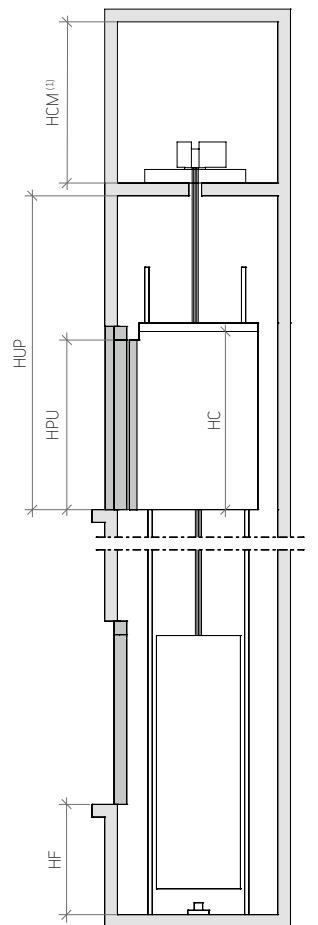
2 ENTRANCES (OPEN THROUGH)



2 ENTRANCES (FRONT & SIDE)

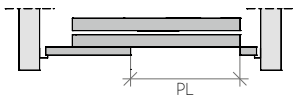


VERTICAL SECTION



(1) HCM - minimum 2,000 mm

WIDE-FRAMED DOOR DETAIL



Orona 3G X-23

Machine-room above electrical gearless solutions

Compact machine-room solutions mainly designed for existing buildings.

Latest direct drive technology.

The affordable and functional option when a lift with machine room is replaced.

General specifications

Load	225 to 630 kg
Capacity	3 to 8 persons
Speed	1 m/s
Maximum travel	60 m
Maximum floors served	21 floors
Entrances	1 front / 2 open through
Drive system	Direct gearless
Controller	ARCA II controller, low energy microprocessor
Door types	Semiautomatic + Articulated (BUS) / Automatic side-opening / Automatic central-opening
Clear door opening	From 500 to 900 mm
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	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G Plus

Standard Optional

1 MACHINE-ROOM

A traditional solution simplifying lift maintenance.



2 DRIVE

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



3 ACCESSIBLE SPACE BELOW THE PIT

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



4 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.



5 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infra red door protection edges. Optional Solid Door for high flow situations.



6 PARAMETRIC/FLEXIBLE

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



7 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.



ECO-EFFICIENCY



ADAPTABILITY






DESIGN AND ACCESSIBILITY



CONTROL AND SAFETY

Standard dimensions

Load / capacity		Car			Lift shaft *											
					Side-opening doors		Central-opening doors HH		HF Pit		HUP Last Floor					
 Persons	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		AH ¹ Width	FH ² Depth	AH ¹ Width	FH ³ Depth	Std.	Reduced		Std. ⁴	Reduced Without safety space (EN 81-21)	
					Accessibility	No. of entrances						With safety space	Without safety space (EN 81-21)			
4	320 kg	825	1,100	700		1	1,300	1,400	1,250	1,400	1,000	705	285	3,380	2,910	
						2 x 180 ⁰		1,500		1,550						
6	450 kg	1,000	1,250	800		1	1,450	1,550	1,450	1,550						
								2 x 180 ⁰		1,650						1,700
8	630 kg	1,100	1,400	900		1	1,600	1,700	1,550	1,700						
								2 x 180 ⁰		1,800						1,850
		1,200	1,250	900		1	1,650	1,550	1,650	1,550						
								2 x 180 ⁰		1,650						1,700

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

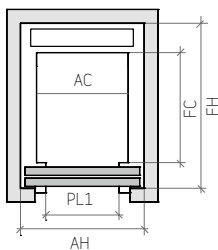
4 HUP minimum for internal car height (HC) of 2,100 mm (HUP= HC + 1,280)

HH - Four panel central door

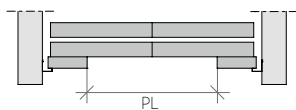
* Minimum plumb measurements

Layout

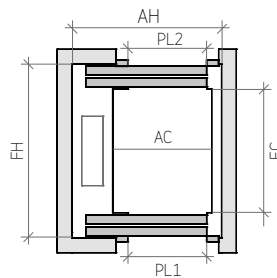
1 ENTRANCE



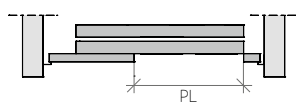
WIDE-FRAMED DOOR DETAIL



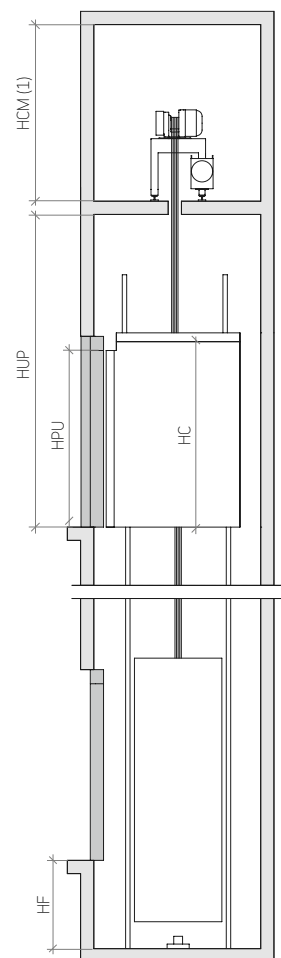
2 ENTRANCES (OPEN THROUGH)



WIDE-FRAMED DOOR DETAIL



VERTICAL SECTION



(1) HCM - minimum 2,000 mm

Customised car dimensions

															Car width																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																																			
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Orona 3G

X-24

Machine-room above electrical gearless solutions

Compact machine-room solutions mainly designed for existing buildings.

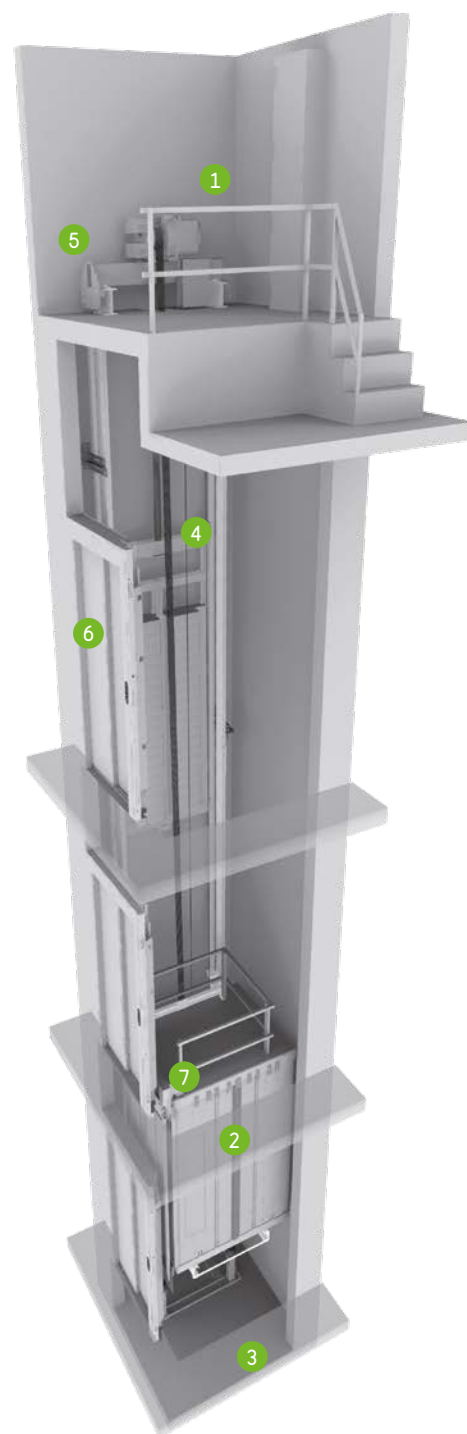
Latest direct drive technology.

Maximum flexibility for the replacement of a lift with machine room.

General specifications

Load	180 to 630 kg
Capacity	2 to 8 persons
Speed	0.6 - 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
Controller	ARCA II controller, low energy microprocessor
Door types	Automatic side-opening / Automatic central-opening / Semiautomatic + Articulated (BUS)
Clear door opening	From 500 to 900 mm
Door height	2,000 / 2,100 / 2,200
Car dimensions	Parametric car dimensions
Internal car height	2,000 / 2,100 / 2,200
Aesthetic solutions	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G Plus

Standard Optional



1 MACHINE-ROOM

A traditional solution simplifying lift maintenance.



2 OPTIMISED PASSENGER UNIT

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



3 ACCESSIBLE SPACE BELOW THE PIT

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



4 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.



5 DRIVE

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



6 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infra red door protection edges. Optional Solid Door for high flow situations.



7 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 ⁵ Last Floor
					Accessibility	No. of entrances	AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth		
4	320 kg	825	1,100	700		1	1,325	1,350	1,600	1,300	1,000 (850) ⁴	3,400
						2 x 180 ⁰		1,500		1,400		
						2 x 90 ⁰	1,450	1,350				
6	450 kg	1,000	1,250	800		1	1,500	1,500	1,800	1,450		
						2 x 180 ⁰		1,650		1,550		
						2 x 90 ⁰	1,625	1,500				
8	630 kg	1,100	1,400	900		1	1,600	1,650	2,000	1,600		
						2 x 180 ⁰		1,800		1,700		
						2 x 90 ⁰	1,725	1,650				
		1,200	1,250	900		1	1,700	1,500	2,000	1,450		
						2 x 180 ⁰		1,650		1,550		
						2 x 90 ⁰	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

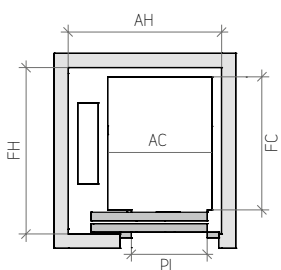
4 HF reduced pit optional 850 mm

5 HUP minimum for internal car height (HC) of 2,100 mm (HUP = HC + 1,300)

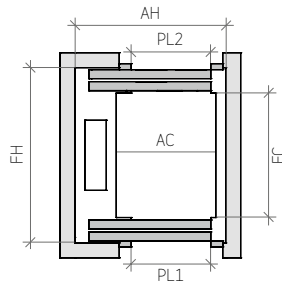
* Minimum plumb measurements

Layout

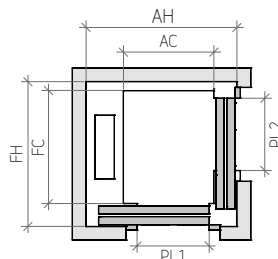
1 ENTRANCE



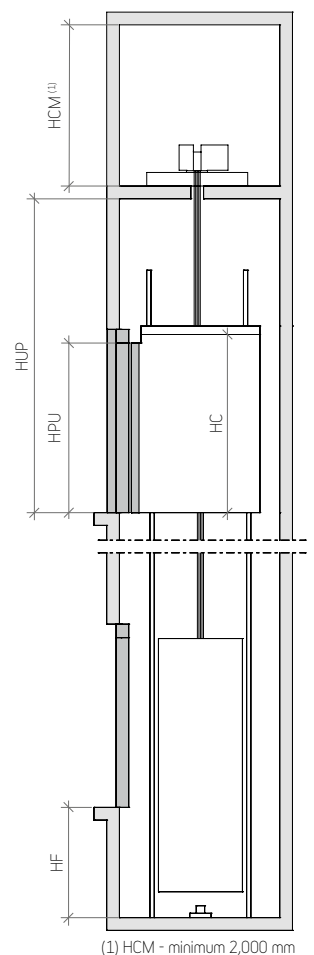
2 ENTRANCES (OPEN THROUGH)



2 ENTRANCES (FRONT & SIDE)

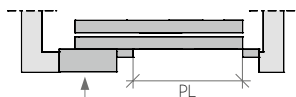


VERTICAL SECTION



(1) HCM - minimum 2,000 mm

WIDE-FRAMED DOOR DETAIL



Controller at the top floor:
420 x 165 mm
Optional locations available.

Orona 3G X-25

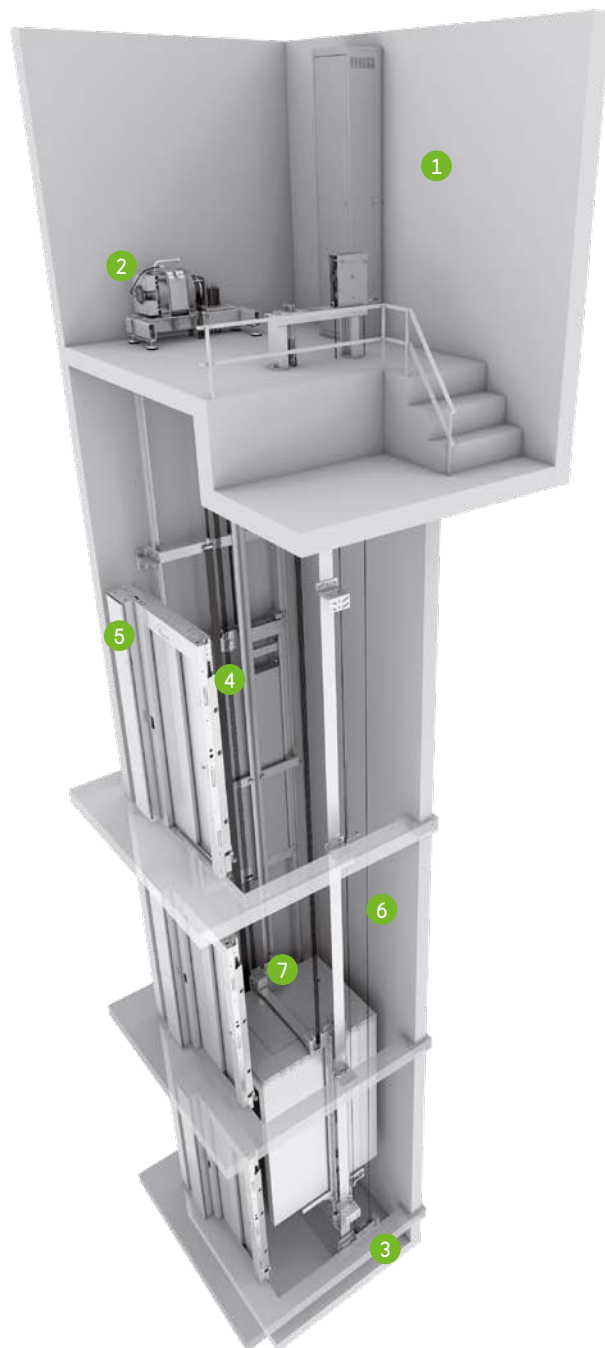
Machine-room above electrical gearless solutions

High efficiency for residential and public buildings.
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	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G Plus

Standard Optional



1 MACHINE-ROOM

A traditional solution simplifying lift maintenance.



2 DRIVE

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



3 ACCESSIBLE SPACE BELOW THE PIT

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



4 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.



5 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infra red door protection edges. Optional Solid Door for high flow situations.



6 PARAMETRIC/FLEXIBLE

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



7 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.



ECO-EFFICIENCY



ADAPTABILITY








DESIGN AND ACCESSIBILITY



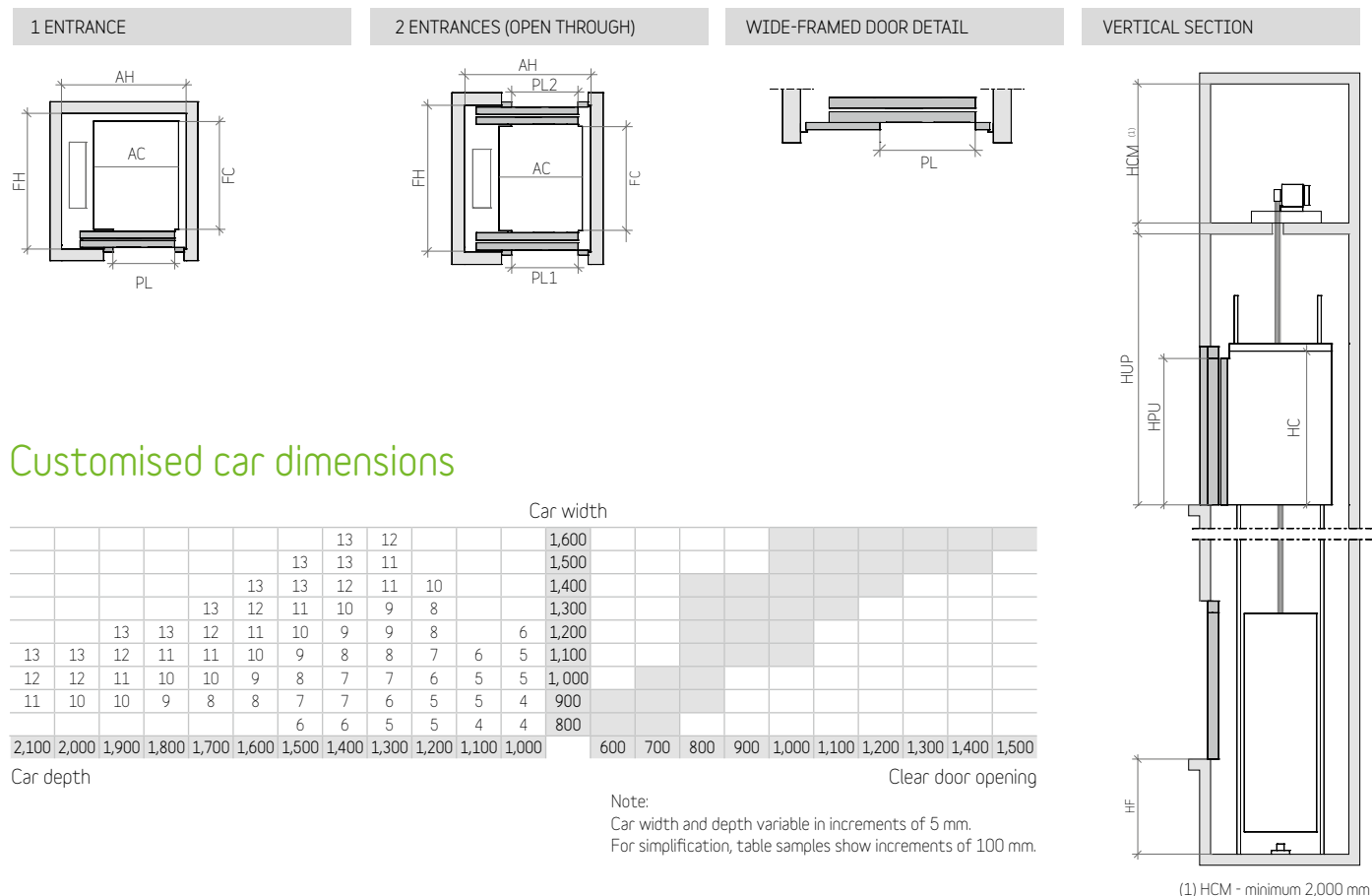
CONTROL AND SAFETY

Standard dimensions

Load / capacity			Car			Lift shaft *								
								Side-opening doors		Central-opening doors				
Speed		Q Load	AC Width	FC Depth	PL Clear opening	Entrances		AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth	HF Pit	HUP Last Floor	
						Accessibility	No. of entrances							
1 m/s	4	320 kg	825	1,100	700		1 2 x 180°	1,300	1,350 1,500			1,000 (830) ⁴	3,400 (3050) ⁵	
	6	450 kg	1,000	1,250	800		1 2 x 180°	1,450	1,500 1,650	1,725	1,450 1,550			
	8	630 kg	1,100	1,400	900		1 2 x 180°	1,600	1,675 1,850	1,925	1,625 1,750			
	10	800 kg	1,350	1,400	900		1 2 x 180°	1,825	1,675 1,850	1,925	1,625 1,750			
	13	1,000 kg	1,600	1,400	1,000		1 2 x 180°	2,075	1,675 1,850	2,150	1,625 1,750			
			1,100	2,100	1,000		1 2 x 180°	1,775	2,375 2,550	2,125	2,300 2,400			
1.6 m/s	4	320 kg	825	1,100	700		1 2 x 180°	1,325	1,350 1,500			1,120	3,550	
	6	450 kg	1,000	1,250	800		1 2 x 180°	1,475	1,500 1,650	17,25	1450 1,550			
	8	630 kg	1,100	1,400	900		1 2 x 180°	1,625	1,675 1,850	1,925	1,625 1,750			
	10	800 kg	1,350	1,400	900		1 2 x 180°	1,850	1,675 1,850	1,925	1,625 1,750			
	13	1,000 kg	1,600	1,400	1,000		1 2 x 180°	2,100	1,675 1,850	2,175	1,625 1,750			
			1,100	2,100	1,000		1 2 x 180°	1,775	2,375 2,550	2,125	2,300 2,400			

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

Layout



Orona 3G X-26

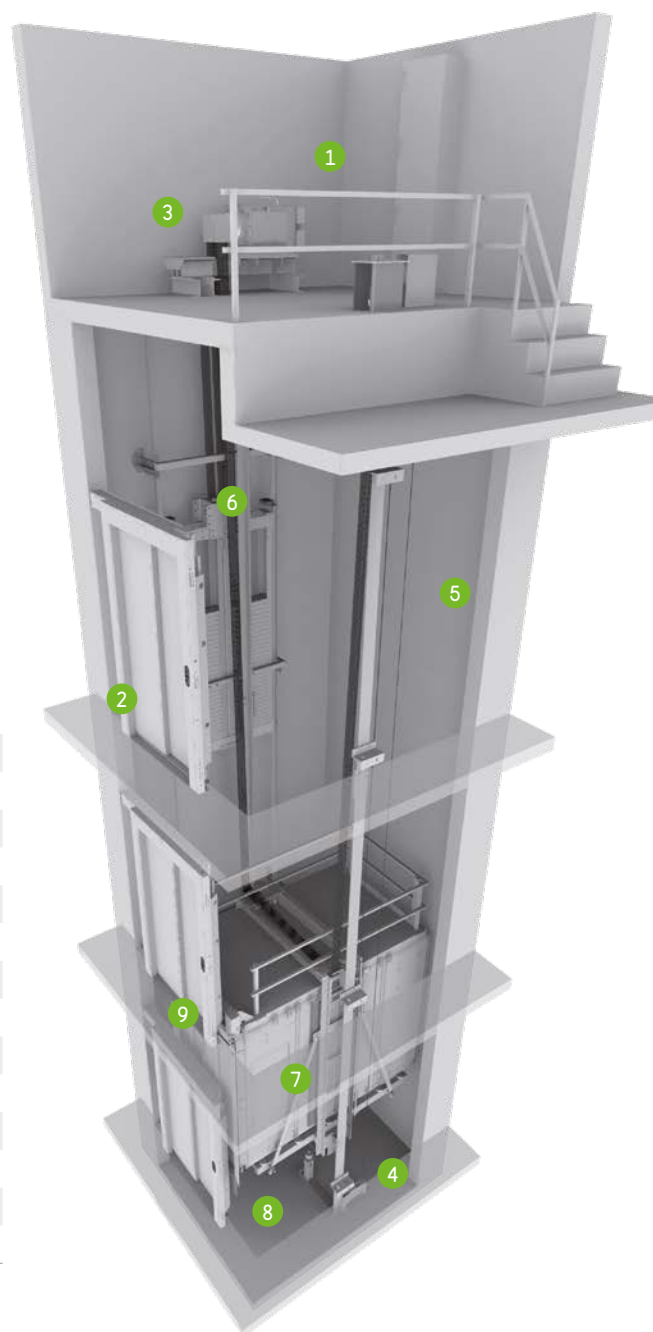
Machine-room above electrical gearless solutions

With the latest direct drive technology in public buildings.
Less noise and more accessible maintenance.
The robust solution with machine room for heavy traffic.

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	Orona 3G Public Packs / Orona 3G Public Plus

Standard Optional



1 MACHINE-ROOM

A traditional solution simplifying lift maintenance.



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 DRIVE

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



4 ACCESSIBLE SPACE BELOW THE PIT

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



5 PARAMETRIC/FLEXIBLE

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



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 ROBUST LIFT CAR

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



9 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.



ECO-EFFICIENCY



ADAPTABILITY








DESIGN AND ACCESSIBILITY



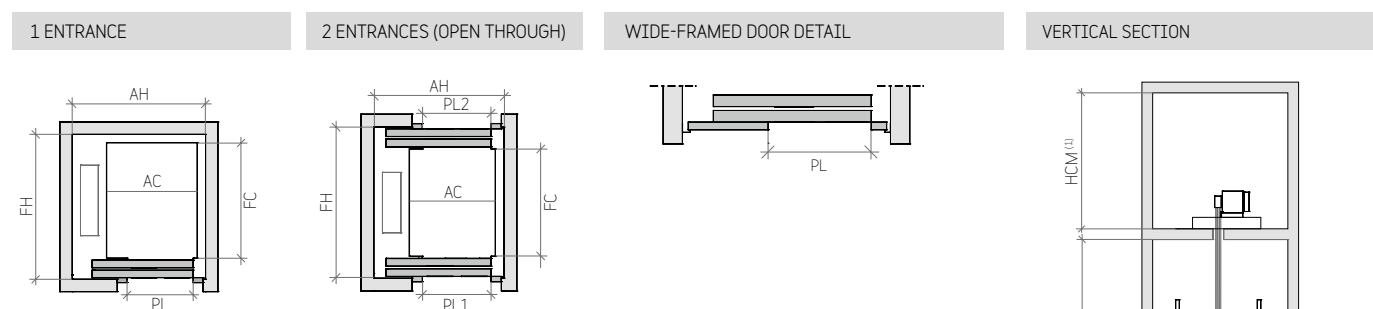
CONTROL AND SAFETY

Standard dimensions

Load / capacity			Car			Lift shaft *							
								Side-opening doors		Central-opening doors			
Speed		Q Load	AC Width	FC Depth	PL Clear opening	Entrances		AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth	HF Pit	HUP ⁴ Last Floor
						Accessibility	No. of entrances						
1 m/s	8	630 kg	1,100	1,400	900		1 2 x 180°	1,700	1,675 1,850	1,950	1,625 1,750	1,050	3,400
	10	800 kg	1,350	1,400	900		1 2 x 180°	1,975	1,675 1,850	1,975	1,625 1,750		
	13	1,000 kg	1,600	1,400	1,000		1 2 x 180°	2,225	1,675 1,850	2,225	1,625 1,750		
			1,100	2,100	1,000		1 2 x 180°	1,775	2,375 2,550				
	17	1,275 kg	2,000	1,400	1,100		1 2 x 180°			2,750	1,650 1,750	1,150	
			1,200	2,300	1,100		1 2 x 180°	1,935	2,600 2,750				
	21	1,600 kg	2,100	1,600	1,100		1 2 x 180°			2,850	1,850 1,950		
			1,400	2,400	1,200		1 2 x 180°	2,085	2,700 2,850				
1.6 m/s	8	630 kg	1,100	1,400	900		1 2 x 180°	1,725	1,675 1,850	1,950	1,625 1,750	1,200	3,550
	10	800 kg	1,350	1,400	900		1 2 x 180°	1,975	1,675 1,850	1,975	1,625 1,750		
	13	1,000 kg	1,600	1,400	1,000		1 2 x 180°	2,225	1,675 1,850	2,225	1,625 1,750		
			1,100	2,100	1,000		1 2 x 180°	1,775	2,375 2,550				
	17	1,275 kg	2,000	1,400	1,100		1 2 x 180°			2,750	1,650 1,750	1,250	
			1,200	2,300	1,100		1 2 x 180°	1,935	2,600 2,750				
	21	1,600 kg	2,100	1,600	1,100		1 2 x 180°			2,850	1,850 1,950		
			1,400	2,400	1,200		1 2 x 180°	2,085	2,700 2,850				

- | | |
|---|--|
| 1 Accessible space below the pit (counterweight with safety gear) add 50 mm to AH | 3 Shaft depth with door tracks projecting 40 mm on the landing |
| 2 Shaft depth with door tracks projecting 60 mm on the landing | 4 HUP minimum for internal car height (HC) of 2,100 mm. |
| | * Minimum plumb measurements |

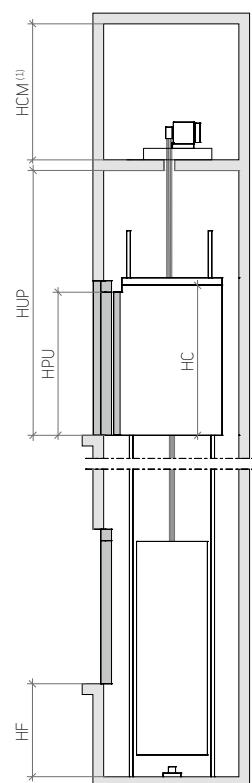
Layout



Customised car dimensions

															Car width															
										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															
				21	21	19	18	16	15	14	13	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															
			15	14	13	13	12	11	11	10	9	8	8		1,100															
					12	12	11	10	10	9	8				1,000															
					11	10	10	9	8	8					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						
Car depth															Clear door opening															

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



(1) HCM - minimum 2,000 mm

Orona 3G X-27

Machine-room above electrical gearless solutions

With the latest direct drive (gearless) technology.
Designed for high-rise buildings.
Great flexibility and high performance.

General specifications

Load	450 to 1,000 kg
Capacity	6 to 13 persons
Speed	1.6 m/s
Maximum travel	120 m
Maximum floors served	64 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 700 to 1000 mm (at intervals of 100 mm)
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	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G Plus

Standard Optional



1 DRIVE

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



2 MACHINE-ROOM

A traditional solution simplifying lift maintenance.



3 ROBUST LIFT CAR

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



4 ACCESSIBLE SPACE BELOW THE PIT

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



5 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infra red door protection edges. Optional Solid Door for high flow situations.



6 PARAMETRIC/FLEXIBLE

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



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.



ECO-EFFICIENCY



ADAPTABILITY








DESIGN AND ACCESSIBILITY



CONTROL AND SAFETY

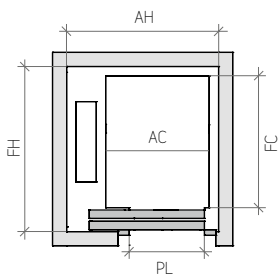
Standard dimensions

Load / capacity			Car			Lift shaft *							
								Side-opening doors		Central-opening doors			
Speed		Q Load	AC Width	FC Depth	PL Clear opening	Entrances		AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth	HF ⁴ Pit	HUP ⁵ Last Floor
						Accessibility	No. of entrances						
1.6 m/s	6	450 kg	1,000	1,250	800		1	1,500	1,800	1,750	1,750	1,200	3,550
							2 x 180°	1,600	1,700	1,750	1,600		
	8	630 kg	1,100	1,400	800		1	1,500	1,950	1,750	1,900	1,250	3,600
							2 x 180°	1,700	1,850	1,750	1,750		
	10	800 kg	1,350	1,400	800		1	1,750	1,950	1,750	1,900	1,250	3,600
							2 x 180°	2,000	1,850	2,000	1,750		
	13	1,000 kg	1,600	1,400	900		1	2,000	1,950	2,000	1,900	1,250	3,600
							2 x 180°	2,250	1,850	2,250	1,750		
			1,100	2,100	900		1	1,700	2,650	1,950	2,600		
							2 x 180°	1,750	2,550	1,950	2,450		

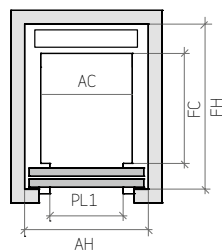
- | | |
|---|--|
| 1 Accessible space below the pit (counterweight with safety gear) add 30 mm to AH | 4 For longer travels to 75 m, HF = 1,300 mm |
| 2 Shaft depth with door tracks projecting 60 mm on the landing | 5 HUP minimum for internal car height (HC) of 2,100 mm (HUP = HC + 1,350) |
| 3 Shaft depth with door tracks projecting 40 mm on the landing | Analyse for each example. If side counterweight Q>630 kg, HUP min = 3,800 mm |
| | * Minimum plumb measurements |

Layout

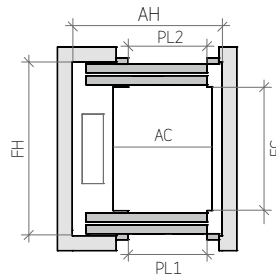
1 ENTRANCE side counterweight



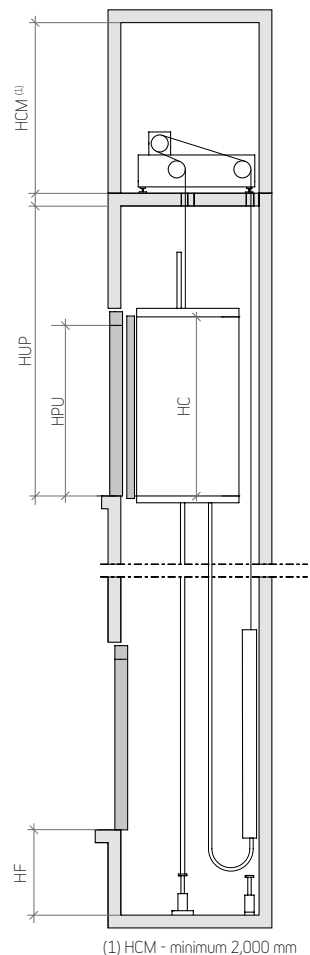
1 ENTRANCE depth counterweight



2 ENTRANCES (OPEN THROUGH)

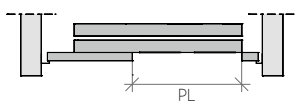


VERTICAL SECTION

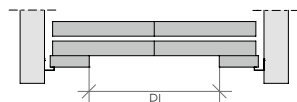


(1) HCM - minimum 2,000 mm

WIDE-FRAMED DOOR DETAIL



WIDE-FRAMED DOOR DETAIL



Customised car dimensions

											Car width													
							13	12	11	10	1,600													
							13	13	11	10	9	1,500												
					13	13	12	11	10	8	1,400													
			13	13	12	11	10	9	8	8	1,300													
		13	12	12	11	10	9	9	8	6	1,200													
13	13	12	11	11	10	9	8	8	7		1,100													
12	12	11	10	10	9	8	7	7	6		1,000													
11	10	10	9	8	8	7	7	6			900													
2,100	2,000	1,900	1,800	1,700	1,600	1,500	1,400	1,300	1,200	1,100			800	900	1,000	1,100	1,200	1,300	1,400	1,500				
Car depth											Clear door opening													

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

Orona 3G X-28

Machine-room above electrical gearless solutions

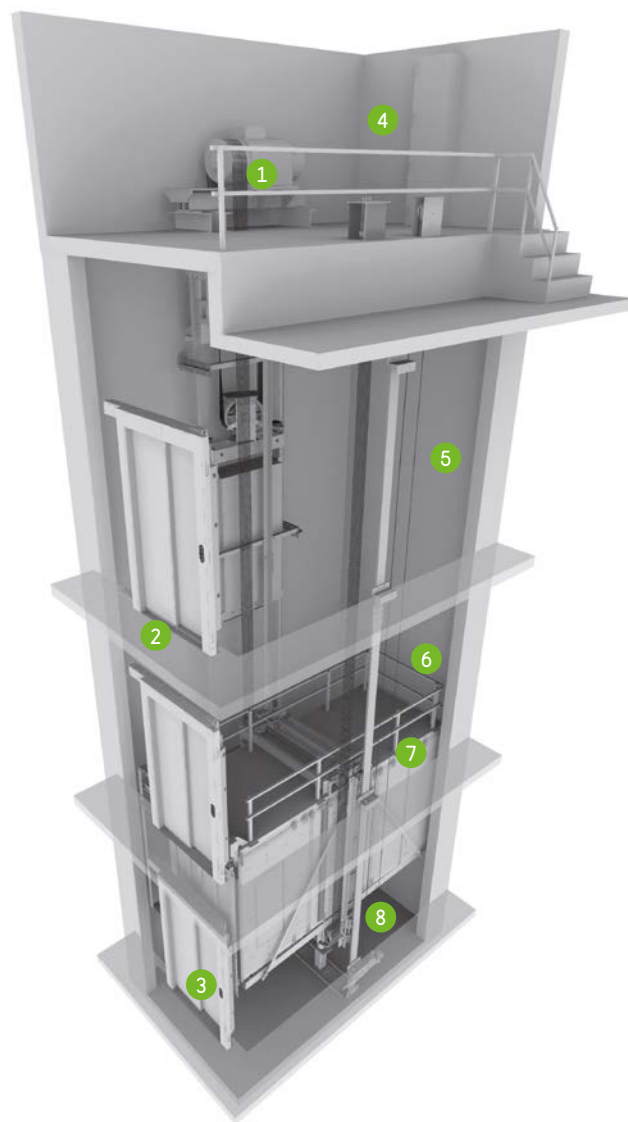
With the latest direct drive technology in public buildings.

Less noise and more accessible maintenance. The large-scale customised solution with a machine room, with maximum performance and maintenance efficiency.

General specifications

Load	1,650 to 2,500 kg
Capacity	22 to 33 persons
Speed	0.6 - 1 - 1.6 m/s
Maximum travel	50 - 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 900 to 2,500 mm (in increments of 100 mm)
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	Orona 3G Plus

Standard Optional



1 DRIVE

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



2 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.



3 SOLID DOORS

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



4 MACHINE-ROOM

A traditional solution simplifying lift maintenance.



5 PARAMETRIC/FLEXIBLE

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



6 ROBUST LIFT CAR

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



7 CARS

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



8 ACCESSIBLE SPACE BELOW THE PIT

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



ECO-EFFICIENCY



ADAPTABILITY








DESIGN AND ACCESSIBILITY



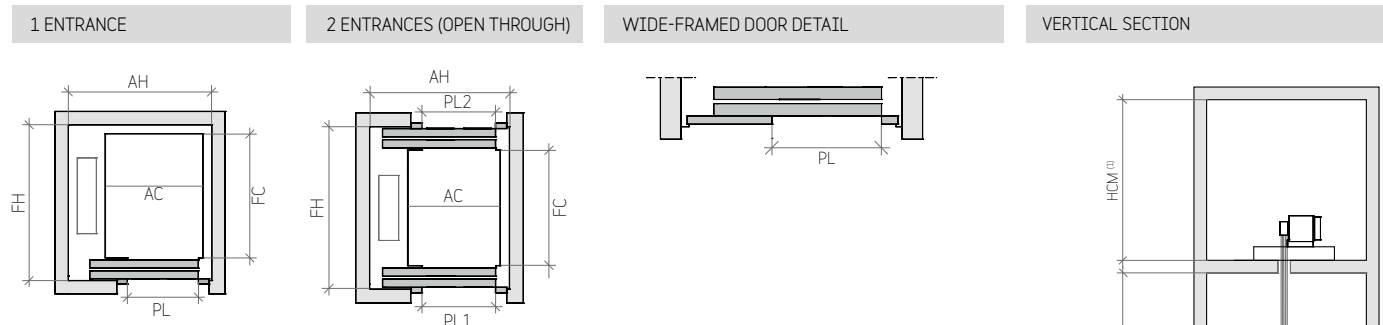
CONTROL AND SAFETY

Standard dimensions

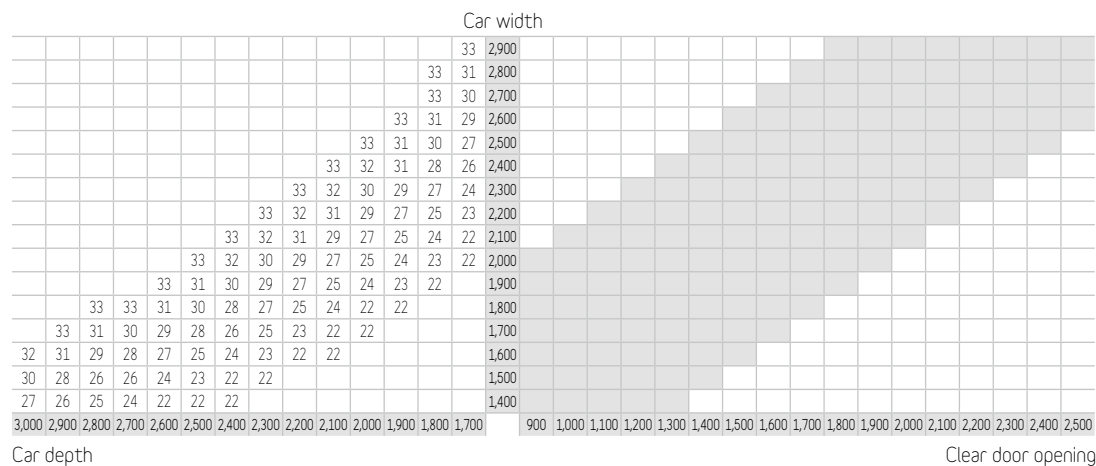
Load / capacity				Car				Lift shaft *				
Speed		 Persons	Q Load	AC Width	FC Depth	PL Clear opening	Type	No. of entrances	AH ¹ Width	FH Depth	HF ² Pit	HUP ³ Last Floor
0.6 m/s		24	1,800 kg	2,350	1,600	1,200	CC	1 2 x 180 ⁰	3,150	1,950 2,160	1,450	3,400
				2,350	1,700	1,200	CC	1 2 x 180 ⁰		3,150		
		1,500	2,700				1,300	TT	1 2 x 180 ⁰			
				1,800	2,700	1,300		TT	1 2 x 180 ⁰	2,600		
		26	2,000 kg				2,350	1,700	1,200			
				1,500	2,700	1,300	TT	1 2 x 180 ⁰	2,300	3,050 3,260		
1 m/s		24	1,800 kg	2,350	1,600	1,200	CC	1 2 x 180 ⁰		3,150	1,950 2,160	1,450
				2,350	1,700	1,200	CC	1 2 x 180 ⁰	3,150		2,050 2,260	
		1,500	2,700				1,300	TT		1 2 x 180 ⁰	2,300	
				1,800	2,700	1,300		TT	1 2 x 180 ⁰	2,600		
		26	2,000 kg				2,350	1,700	1,200		CC	
				1,500	2,700	1,300	TT	1 2 x 180 ⁰	2,300	3,050 3,260		
1.6 m/s		24	1,800 kg	2,350	1,600	1,200	CC	1 2 x 180 ⁰		3,150	2,050 2,260	1,600
				2,350	1,700	1,200	CC	1 2 x 180 ⁰	3,150		2,050 2,260	
		1,500	2,700				1,300	TT		1 2 x 180 ⁰	2,300	
				1,800	2,700	1,300		TT	1 2 x 180 ⁰	2,600		
		26	2,000 kg				2,350	1,700	1,200		CC	
				1,500	2,700	1,300	TT	1 2 x 180 ⁰	2,300	3,050 3,260		

- * Minimum plumb measurements

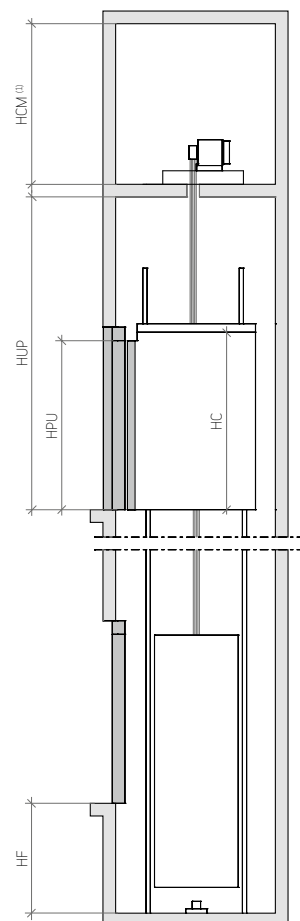
Layout



Customised car dimensions



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



(1) HCM - minimum 2000 mm

Orona 3G X-30

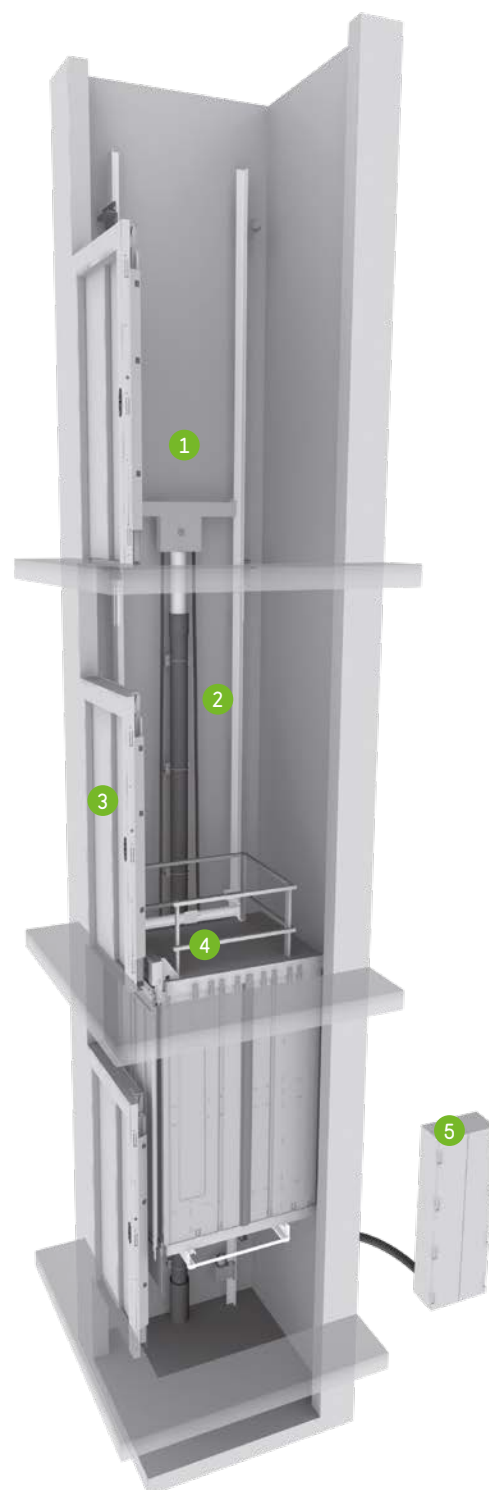
Hydraulic drive solutions

For light-traffic applications.
The versatile and adaptable hydraulic solution.

General specifications

Load	320 to 1,000 kg
Capacity	2 to 16 persons / 2 to 4 persons / 13 to 16 persons
Speed	0.6 m/s
Maximum travel	21 m
Maximum floors served	7 floors
Entrances	1 front / 2 open through / 2 front & side
Drive system	Hydraulic
Controller	ARCA II controller, low energy microprocessor
Door types	Semi-automatic + Articulated (BUS) / Automatic side-opening / Automatic central-opening
Clear door opening	From 600 to 1,600 mm (in 100 mm increments)
Door height	2,000 / 2,100
Car dimensions	Parametric car dimensions
Internal car height	2,100 / 2,200
Aesthetic solutions	Orona 3G Domo Packs / Orona 3G Public Packs / Orona 3G Plus

Standard Optional



1 HYDRAULIC LIFTS

The hydraulic systems, renowned for their long life cycle, are very versatile and offer convenient solutions to high load requirements or reduced shaft spaces.



2 PARAMETRIC/FLEXIBLE

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



3 DOORS

Compact permanent magnet motor for fast, accurate and quiet door operation giving the most advanced performance. Advanced door opening and full height infra red door protection edges. Optional Solid Door for high flow situations.



4 CAR ACCESSIBILITY

Optional EN 81-70 accessible car. Optional car light control, including LED lighting options.










5 REDUCED MACHINE ROOM

As an alternative to a machine-room, the controller/machinery can be fitted into a metal cabinet and located in a convenient location within the building.



Standard dimensions

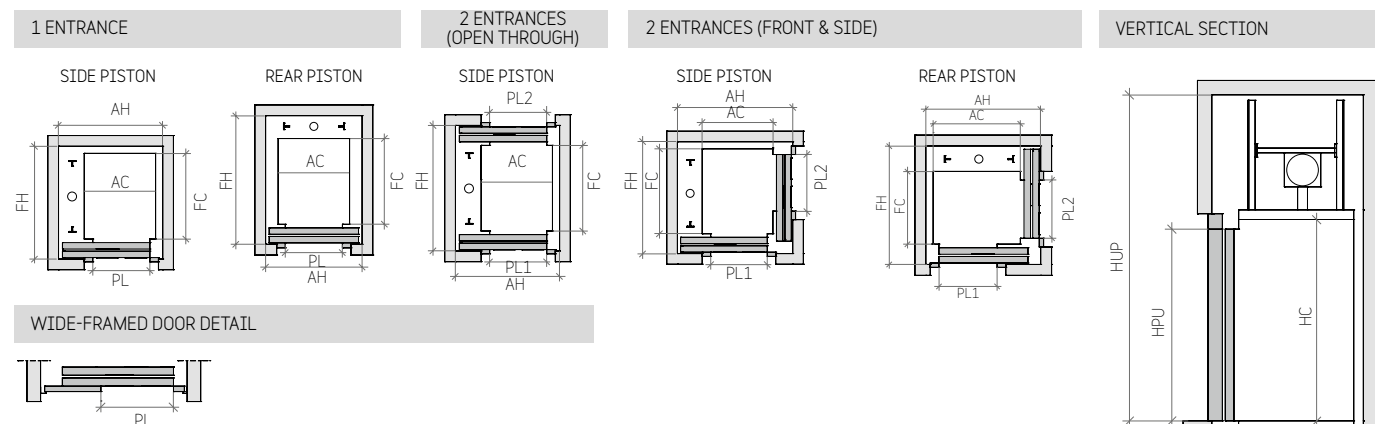
Load / capacity		Lift shaft *														
		Side piston (TT)								Rear piston (HH)		HF Pit		HUP ² Last Floor		
		Standard car			Lift shaft											
	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		AH Width	FH ¹ Depth	AH Width	FH ¹ Depth	Std.	Without safety space (EN 81-21)	Std.	Without safety space (EN 81-21)		
Persons					Accessibility	No. of entrances										
2	180 kg	750	750	600		1	1200	1,000	1,100	1,300	1,050	615	3,010			
						2 x 180 ⁰	1,200	1,150								
						2 x 90 ⁰	1,350	1,000	1,100	1,300						
4	320 kg	825	1,100	700		1	1,250	1,350	1,175	1,650		860		3,150		
						2 x 180 ⁰	1,250	1,500								
						2 x 90 ⁰	1,400	1,350	1,175	1,650						
6	450 kg	1,000	1,250	800		1	1,425	1,500	1,325	1,800					3,400	3,230
						2 x 180 ⁰	1,425	1,650								
						2 x 90 ⁰	1,575	1,500	1,325	1,800						
8	630 kg	1,100	1,400	900		1	1,575	1,650			875					
						2 x 180 ⁰	1,575	1,800								
						2 x 90 ⁰	1,675	1,650								
10	800 kg	1,350	1,400	900		1	1,800	1,650	1,700	1,975		1,100				
						2 x 180 ⁰	1,800	1,800								
						2 x 90 ⁰	1,925	1,650	1,700	1,975						
13	1,000 kg	1,100	2,100	900		1	1,550	2,350							875	
						2 x 180 ⁰	1,550	2,500								
						2 x 90 ⁰	1,675	2,350								
		1,600	1,400	1,000		1			1,700	1,975	875					
						2 x 180 ⁰										
						2 x 90 ⁰			1,850	1,975						
16	1,250 kg	1,200	2,300	1,000		1	1,650	2,550				875				
						2 x 180 ⁰	1,650	2,700								
						2 x 90 ⁰	1,775	2,550								

- 1 Shaft depth with door tracks projecting 60 mm on the landing
- 2 HUP minimum for internal car height (HC) of 2,100 mm (HUP = HC + 1225)

TT - Two panel telescopic door
HH - Four panel central door

* Minimum plumb measurements

Layout



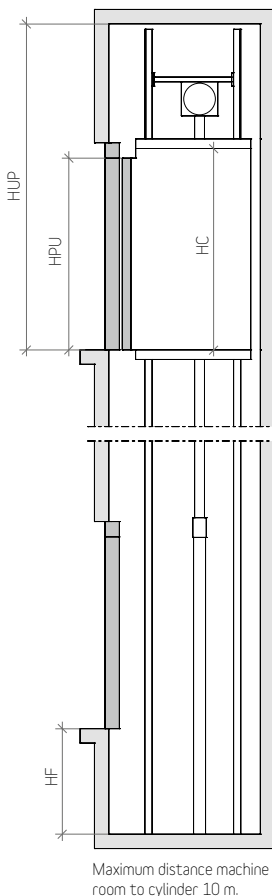
Customised car dimensions

SIDE PISTON														Car width													
			16	15	14	13	12	11	10					1500													
		16	15	14	13	12	11	10	9					1400													
16	16	15	13	13	12	11	10	9						1300													
15	14	13	13	12	10	10	9	8	8	7	6	5	5	1200													
13	13	12	11	10	10	9	8	8	7	6	5	5	4	1100													
12	11	10	10	9	8	8	7	7	6	5	5	5	4	1000													
10	10	9	8	8	8	7	6	6	5	5	4	4		900													
9	8	8	8	7	7	6	5	5	5	4	4			800													
2,100	2,000	1,900	1,800	1,700	1,600	1,500	1,400	1,300	1,200	1,100	1,000	900	800			600	700	800	900	1,000	1,100	1,200	1,300	1,400			
Car depth														Clear door opening													

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

REAR PISTON										Car width									
				13	12	10	9	2,100											
				13	12	10	9	2,000											
			13	12	10	9	8	1,900											
			13	12	10	9	8	1,800											
		13	12	10	9	8	7	1,700											
	13	12	10	10	9	8	7	1,600											
13	12	11	10	8	8	7	6	1,500											
12	11	10	9	8	8	7	6	1,400											
11	10	9	8	8	7	6	5	1,300											
10	9		8	7	6	5	5	1,200											
9			7	6	5	5	4	1,100											
			6	5	5	4	4	1,000											
			5	5	4	4		900											
			5	4	4			800											
1,500	1,400	1,300	1,200	1,100	1,000	900	800		600	700	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.



Orona 3G

Options



ECO-EFFICIENCY

	X-10	X-11	X-14	X-15	X-16
Low-energy drive	•	•	•	•	•
Efficient lighting	•	•	•	•	•
Automatic car lighting switch off	•	•	•	•	•
Landing illumination control	○	○	○	○	○
Lift stand-by mode	○	○	○	○	○



ADAPTABILITY

Flexible controller location	○		○	○	○
Lift well enclosure	○	○	○	○	○
Reduced headroom	R	V		R	
Reduced pit	R	R/V	R	R	
Accessible space below the pit	○	○	○	○	○



CONTROL AND SAFETY

EVACUATION

Autodialler system	○	○	○	○	○
Automatic rescue system	○	○	○	○	○
Behaviour of lifts in the event of fire (EN 81-73)	○	○	○	○	○
Connection to auxiliary power source (generator)	○	○	○	○	○
Pit water detector	○	○	○	○	○
Safety landing call cancelling	○	○	○	○	○
Firefighters lift (EN 81-72)				○	° (> 1,000 kg)

ACCESS CONTROL

Zone cancelling, coded call	○	○	○	○	○
Compulsory stop at main floor	○	○	○	○	○
External call cancelling	○	○	○	○	○
Automatic car call cancelling	○	○	○	○	○
Independent entrance selection	○	○	○	○	○
Non-emergency outage	○	○	○	○	○
Emergency outage	○	○	○	○	○
Forced closing (nudging feature)	○	○	○	○	○
Anti-vandalism (EN 81-71)				○	○

COMMUNICATIONS*

Pre-opening doors	○	○	○	○	○
Down collective control	○	○	○	○	○
Full collective control	○	○	○	○	○
Intercom system	○	○	○	○	○

* In order to check out these options please consult with us.

X-18	X-20	X-23	X-24	X-25	X-26	X-27	X-28	X-30
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(R) With safety space (V) With safety space via compensatory measures according to EN81-21

• Standard ° Optional

- 1 out of every 10 new lifts in Europe is Orona
- More than 100 countries have Orona products installed
- 250,000 lifts worldwide with Orona technology
- First company in the sector worldwide certified in Eco-design (ISO 14006)

Orona 3G

- Technical solutions
- Aesthetic solutions



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