



Orona

Orona 3G

Technical Solutions



Orona



1000 kg 13 Pers.

RAE 234578904 CE 2004 A20 2014



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



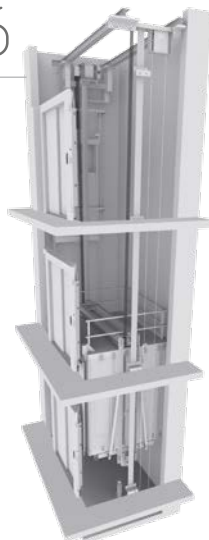
Orona 3G
X-14



Orona 3G
X-15



Orona 3G
X-16

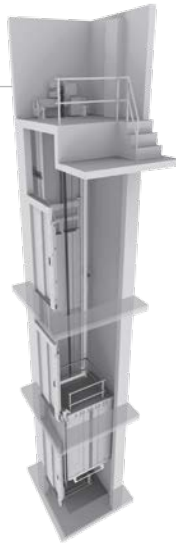


Orona 3G
X-18



Machine-room above
electrical gearless
solutions

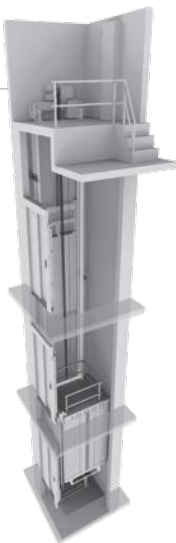
Orona 3G
X-20



Orona 3G
X-23



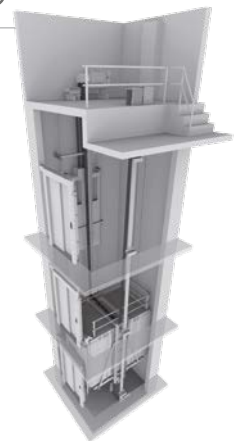
Orona 3G
X-24



Orona 3G
X-25



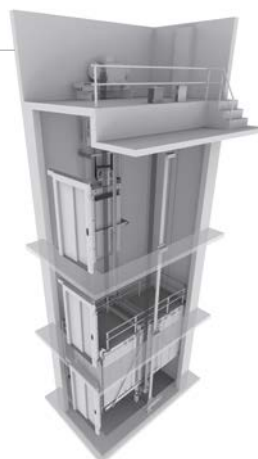
Orona 3G
X-26



Orona 3G
X-27

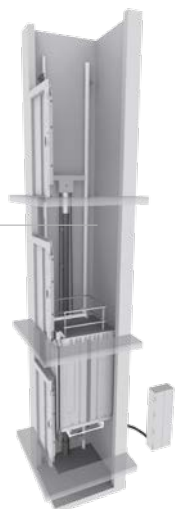


Orona 3G
X-28



Hydraulic drive
solutions

Orona 3G
X-30



Orona 3G

X-10

Machine-room-less electrical gearless solutions (MRLG)

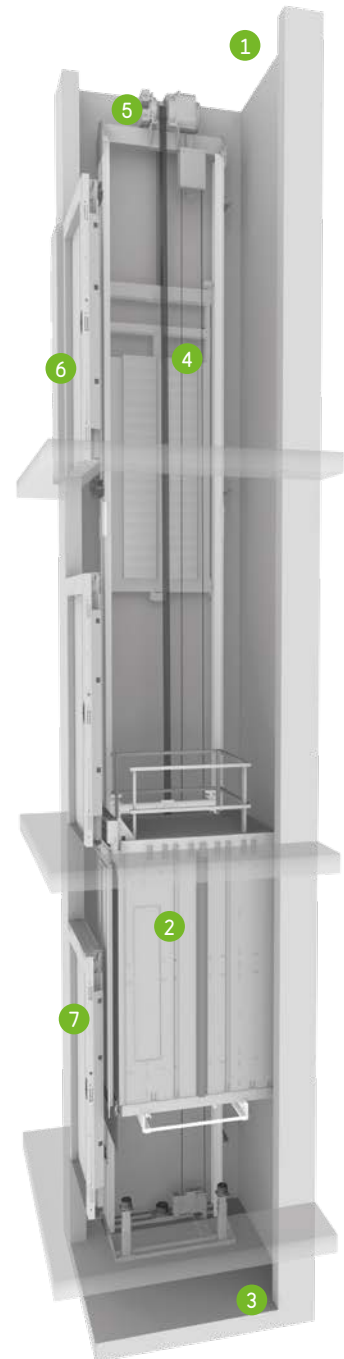
High efficiency for residential and public buildings for medium traffic. Optimum use of space and latest direct drive (Gearless) technology. The standard solution.

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

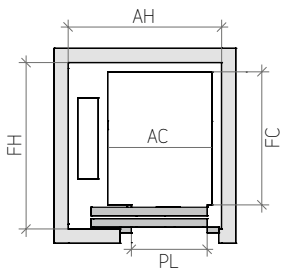
Load / capacity		Car			Lift shaft *							
Persons	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		Side-opening doors		Central-opening doors		HF Pit	HUP Last Floor
					Accessibility	No. of entrances	AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth		
4	320 kg	825	1,100	700		1	1,325	1,350	1,600	1,300	1,000 (850) ⁴	3,400
						2 x 180 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	1,000 (850) ⁴	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	1,000 (850) ⁴	3,400 (3,000) ⁵
						2 x 180 ⁰		1,800		1,700		
						2 x 90 ⁰	1,725	1,650				
			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

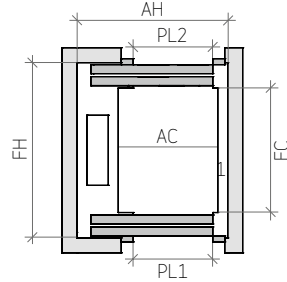
- 4 HF reduced pit optional 850 mm
 - 5 Minimum HUP for internal car height (HC) of 2,100 mm (HUP = HC + 1,300)
HUP reduced headroom optional only for 6 and 8 persons (HUP = HC + 900)
- * Minimum plumb measurements

Layout

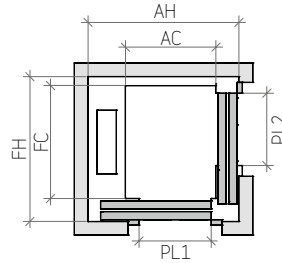
1 ENTRANCE



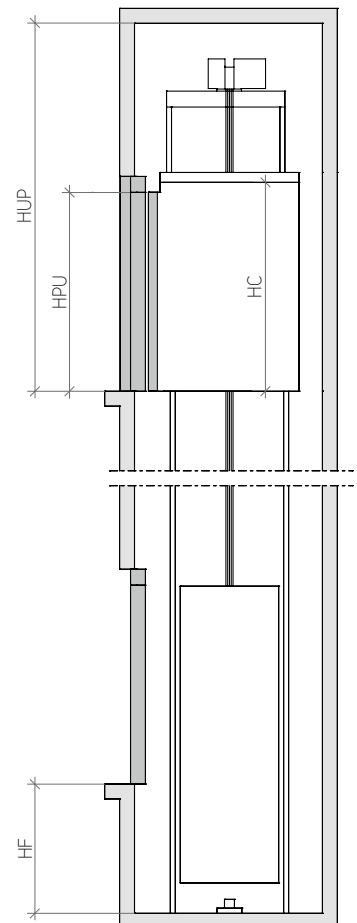
2 ENTRANCES (OPEN THROUGH)



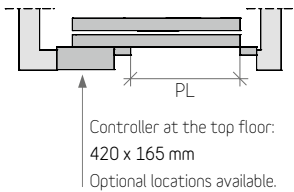
2 ENTRANCES (FRONT & SIDE)



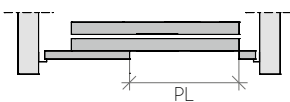
VERTICAL SECTION



CONTROLLER DETAIL



WIDE-FRAMED DOOR DETAIL



Orona 3G

X-11

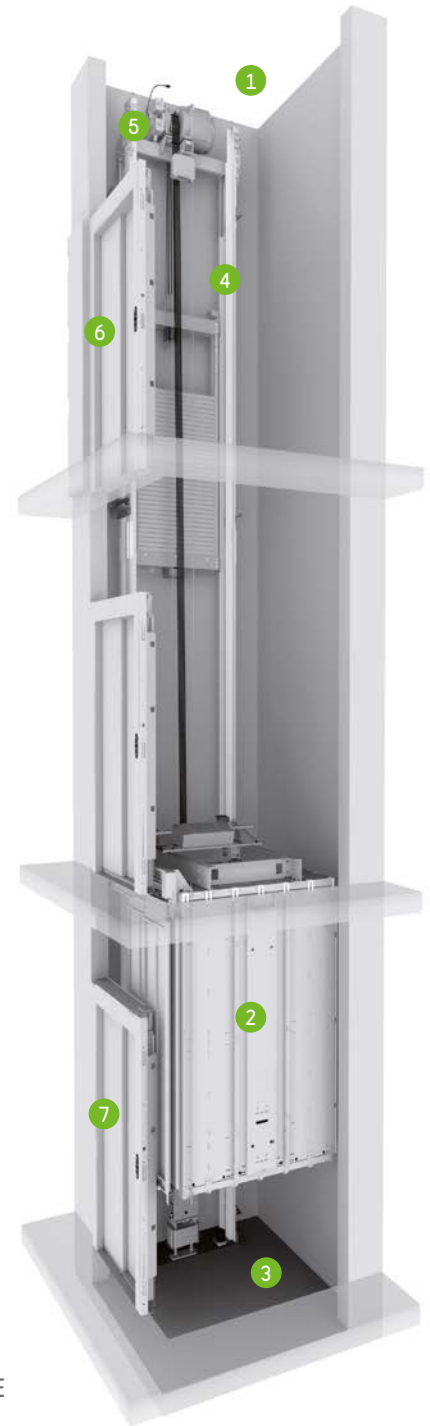
Machine-room-less electrical gearless solutions (MRLG)

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.



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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.



Orona 3G

X-14

Machine-room-less electrical gearless solutions (MRLG)

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

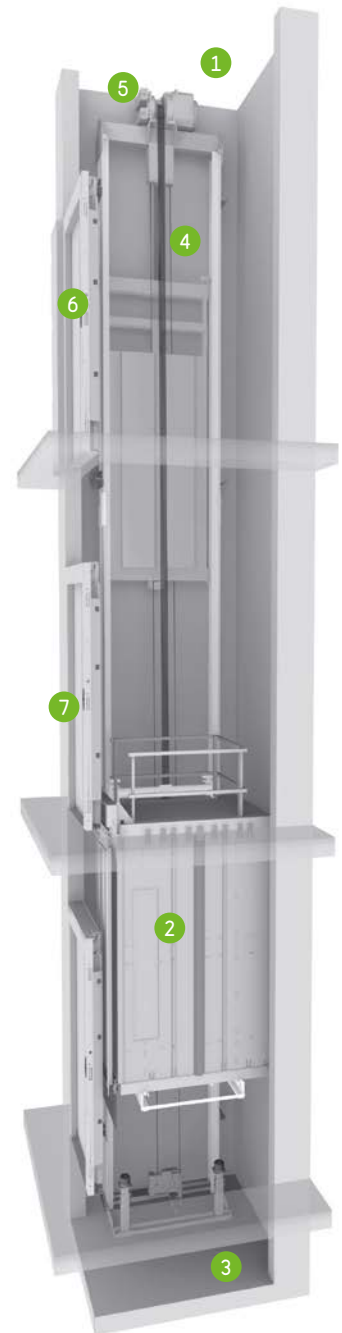
Latest direct drive technology.

The customised solution with maximum flexibility.

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	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



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Standard dimensions

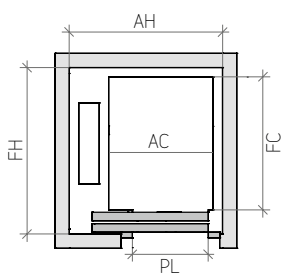
Load / capacity		Car			Lift shaft *							
Persons	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		Side-opening doors		Central-opening doors		HF Pit	HUP ⁵ Last Floor
					Accessibility	No. of entrances	AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth		
4	320 kg	825	1,100	700		1	1,325	1,350	1,600	1,300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

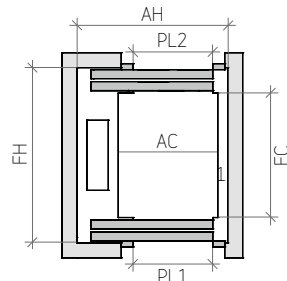
- 4 HF reduced pit optional 850 mm
 - 5 Minimum HUP for internal car height (HC) of 2,100 mm (HUP = HC + 1,300)
- * Minimum plumb measurements

Layout

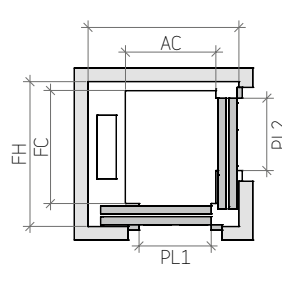
1 ENTRANCE



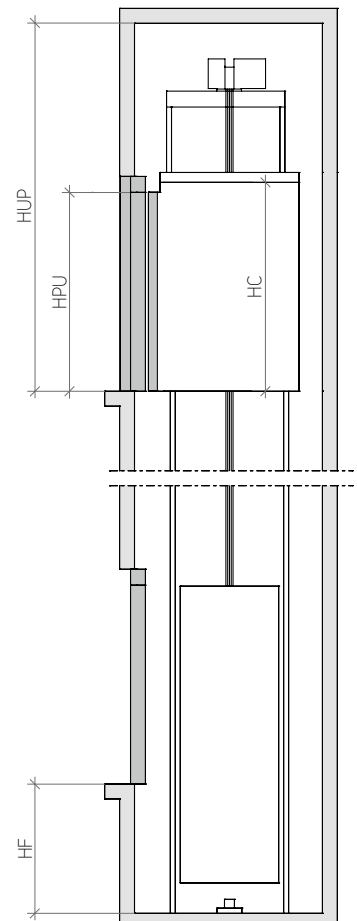
2 ENTRANCES (OPEN THROUGH)



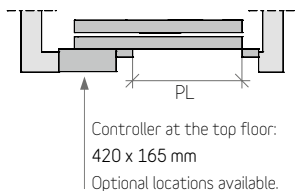
2 ENTRANCES (FRONT & SIDE)



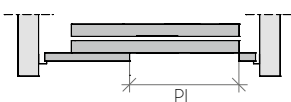
VERTICAL SECTION



CONTROLLER DETAIL



WIDE-FRAMED DOOR DETAIL



Orona 3G

X-15

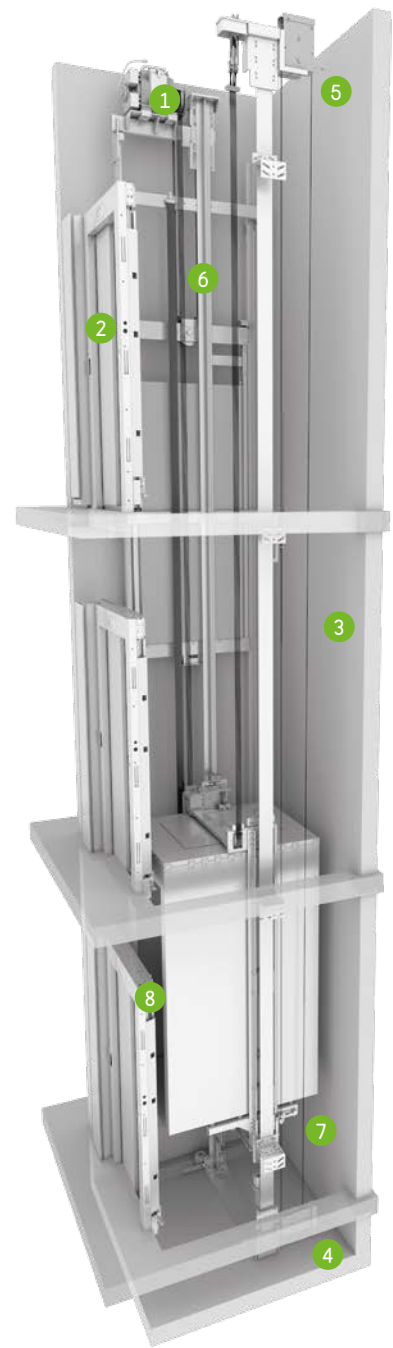
Machine-room-less electrical gearless solutions (MRLG)

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.



Orona 3G

X-16

Machine-room-less electrical gearless solutions (MRLG)

High efficiency for public buildings.

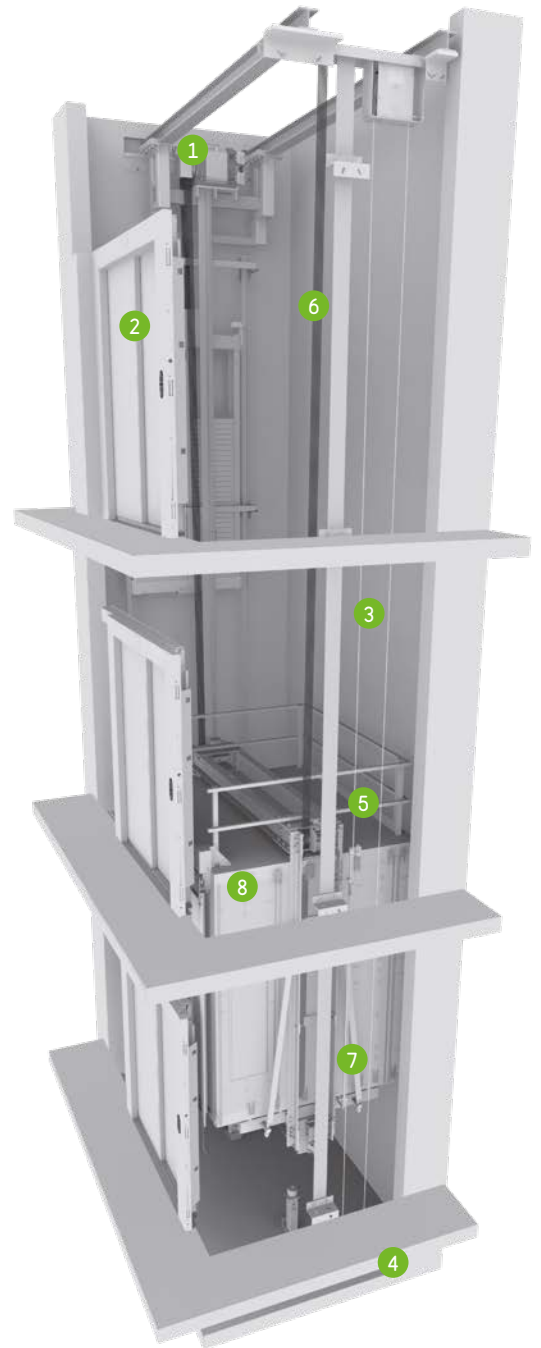
Maximum reliability.

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.



Orona 3G

X-18

Machine-room-less electrical gearless solutions (MRLG)

High efficiency for public buildings.

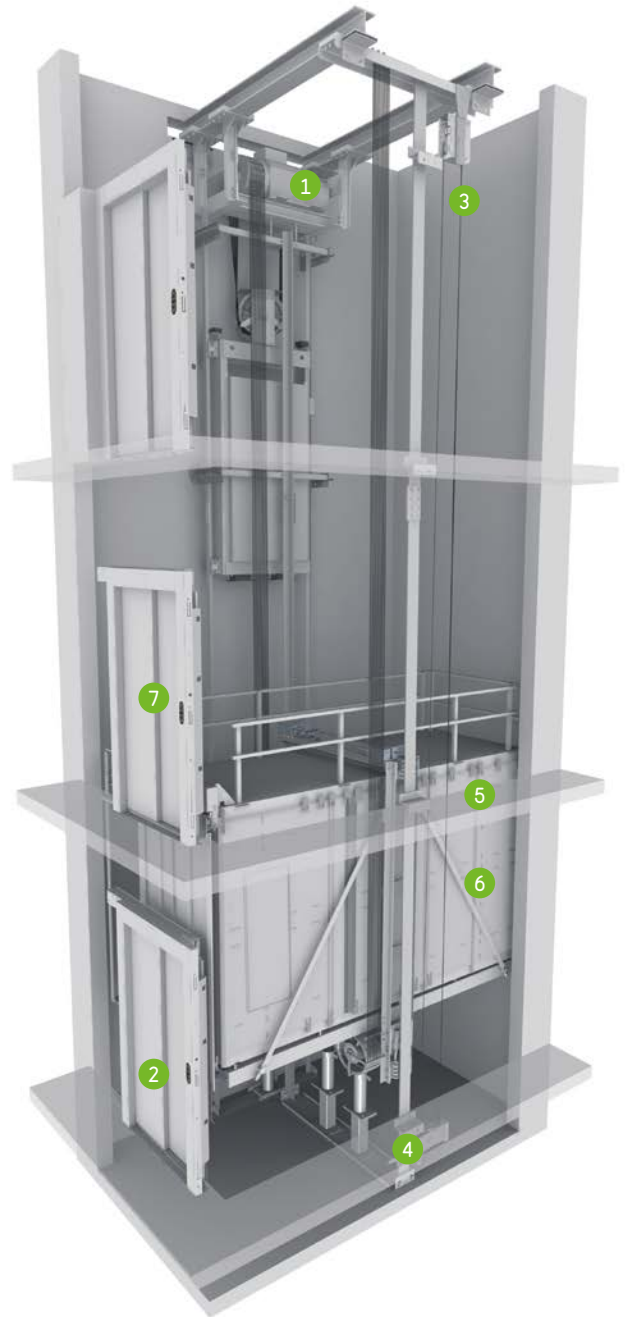
Maximum durability, comfort, and reliability.

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).



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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			Q Load	AC Width	FC Depth	PL Clear opening	Type	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	3,625
		26	2,000 kg	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	3,050 3,260		
33	2,500 kg	1,800	2,700	1,300	TT	1 2 x 180 ⁰	2,600	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	3,650
		26	2,000 kg	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	3,050 3,260		
33	2,500 kg	1,800	2,700	1,300	TT	1 2 x 180 ⁰	2,600	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	3,790
		26	2,000 kg	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	3,050 3,260		
33	2,500 kg	1,800	2,700	1,300	TT	1 2 x 180 ⁰	2,600	3,050 3,260				

1 With 2 panel telescopic doors

2 With PVC flooring. Marble floor option + 20 mm

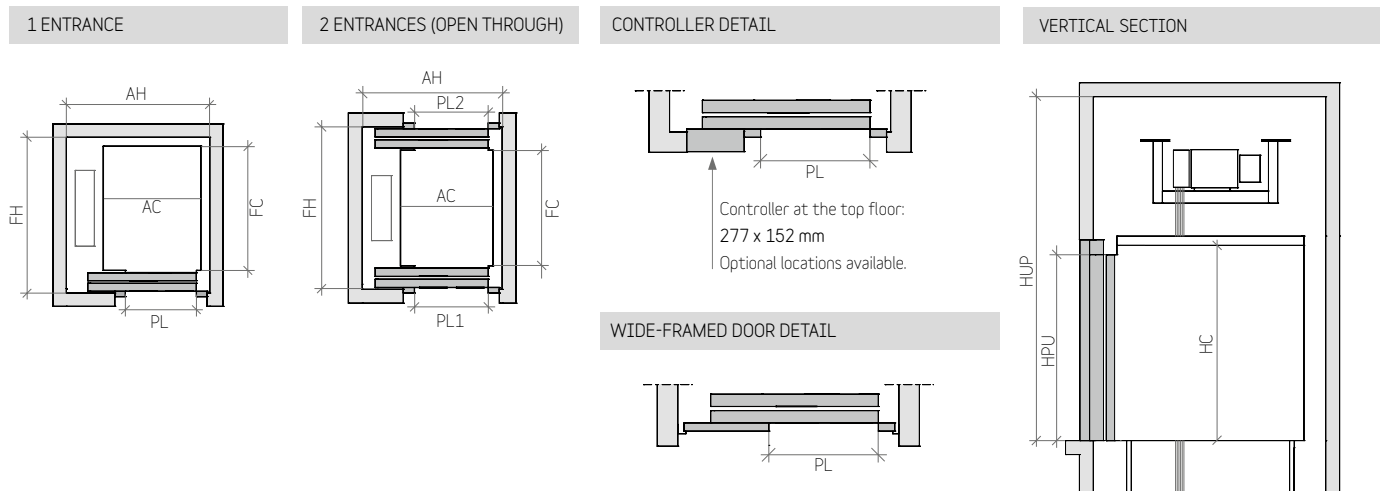
3 HUP minimum for internal car height (HC) of 2,100 mm

CC - Two panel central door

TT - Two panel telescopic door

* Minimum plumb measurements

Layout



Customised car dimensions

Car depth		Car width		Clear door opening	
3,000	2,900	3,000	2,900	900	1,000
33	31	33	31	1,100	1,200
33	31	33	31	1,300	1,400
33	31	33	31	1,500	1,600
33	31	33	31	1,700	1,800
33	31	33	31	1,900	2,000
33	31	33	31	2,100	2,200
33	31	33	31	2,300	2,400
33	31	33	31	2,500	2,600
33	31	33	31	2,700	2,800
33	31	33	31	2,900	3,000
33	31	33	31	3,100	3,200
33	31	33	31	3,300	3,400
33	31	33	31	3,500	3,600
33	31	33	31	3,700	3,800
33	31	33	31	3,900	4,000
33	31	33	31	4,100	4,200
33	31	33	31	4,300	4,400
33	31	33	31	4,500	4,600
33	31	33	31	4,700	4,800
33	31	33	31	4,900	5,000
33	31	33	31	5,100	5,200
33	31	33	31	5,300	5,400
33	31	33	31	5,500	5,600
33	31	33	31	5,700	5,800
33	31	33	31	5,900	6,000
33	31	33	31	6,100	6,200
33	31	33	31	6,300	6,400
33	31	33	31	6,500	6,600
33	31	33	31	6,700	6,800
33	31	33	31	6,900	7,000
33	31	33	31	7,100	7,200
33	31	33	31	7,300	7,400
33	31	33	31	7,500	7,600
33	31	33	31	7,700	7,800
33	31	33	31	7,900	8,000
33	31	33	31	8,100	8,200
33	31	33	31	8,300	8,400
33	31	33	31	8,500	8,600
33	31	33	31	8,700	8,800
33	31	33	31	8,900	9,000
33	31	33	31	9,100	9,200
33	31	33	31	9,300	9,400
33	31	33	31	9,500	9,600
33	31	33	31	9,700	9,800
33	31	33	31	9,900	10,000

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

Orona 3G

X-20

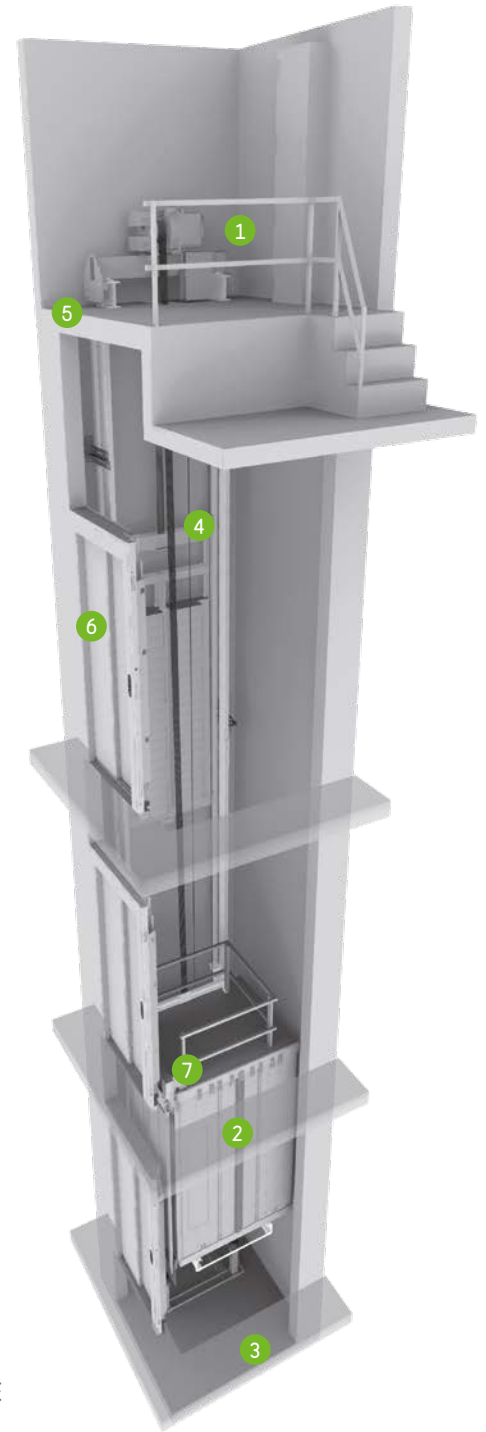
Machine-room above electrical gearless solutions

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

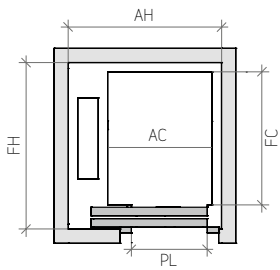
Load / capacity		Car			Lift shaft *							
Persons	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		Side-opening doors		Central-opening doors		HF Pit	HUP Last Floor
					Accessibility	No. of entrances	AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth		
4	320 kg	825	1,100	700		1	1,325	1,350	1,600	1,300	1,000 (850) ⁴	3,400
						2 x 180 ⁰		1,500				
						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	1,000 (850) ⁴	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	1,000 (850) ⁴	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	1,000 (850) ⁴	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

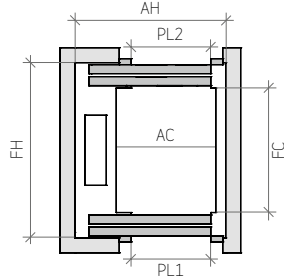
- 4 HF reduced pit optional 850 mm
 - 5 Minimum HUP for internal car height (HC) of 2,100 mm (HUP = HC + 1,300)
HUP reduced headroom optional only for 6 and 8 persons (HUP = HC + 900)
- * Minimum plumb measurements

Layout

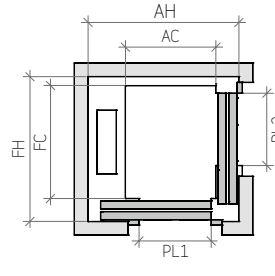
1 ENTRANCE



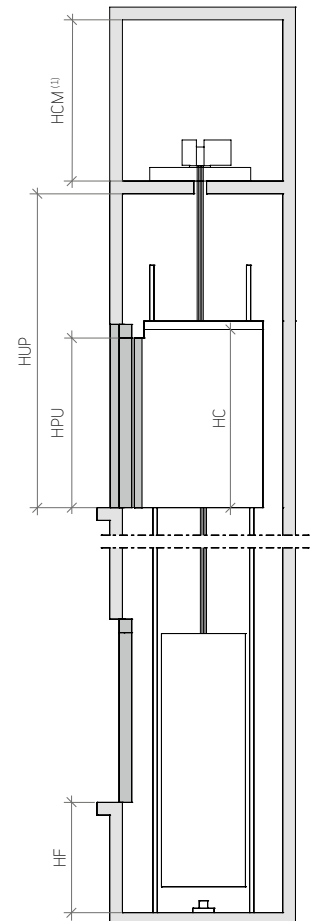
2 ENTRANCES (OPEN THROUGH)



2 ENTRANCES (FRONT & SIDE)

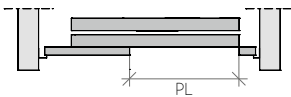


VERTICAL SECTION



(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.



Orona 3G

X-24

Machine-room above electrical gearless solutions

Compact machine-room solutions mainly designed for existing buildings.

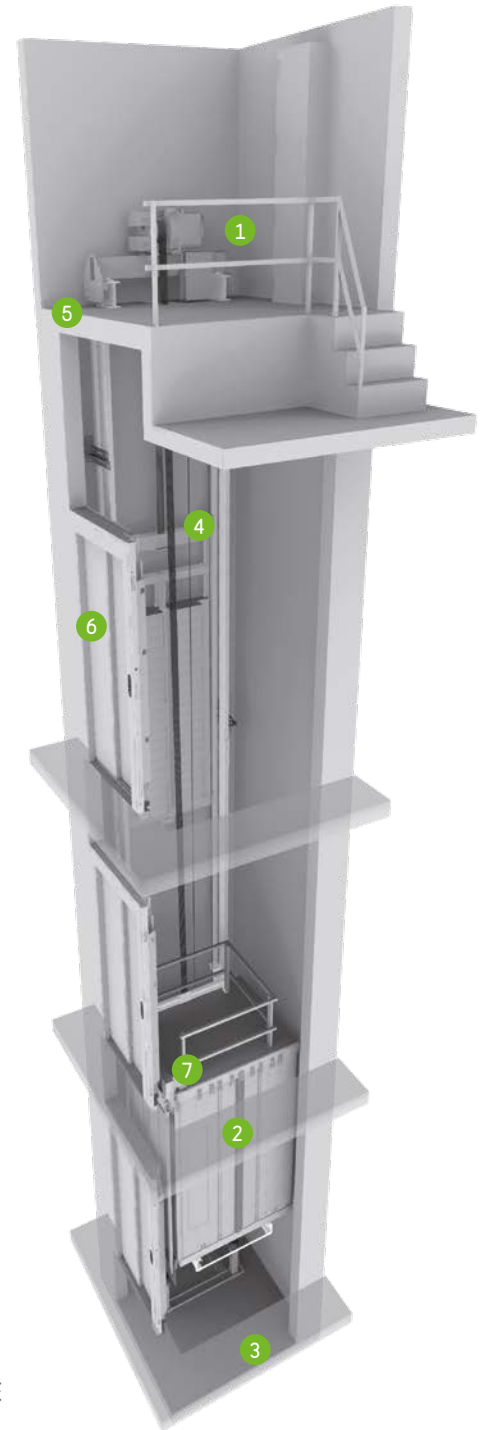
Latest direct drive technology.

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	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 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

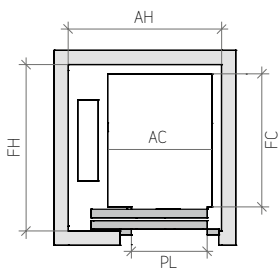
Load / capacity		Car			Lift shaft *							
Persons	Q Load	AC Width	FC Depth	PL Clear opening	Entrances		Side-opening doors		Central-opening doors		HF Pit	HUP ⁵ Last Floor
					Accessibility	No. of entrances	AH ¹ Width	FH ² Depth	AH Width	FH ³ Depth		
4	320 kg	825	1,100	700		1	1,325	1,350	1,600	1,300	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

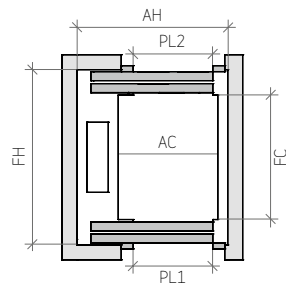
- 4 HF reduced pit optional 850 mm
 - 5 Minimum HUP for internal car height (HC) of 2,100 mm (HUP = HC + 1,300)
- * Minimum plumb measurements

Layout

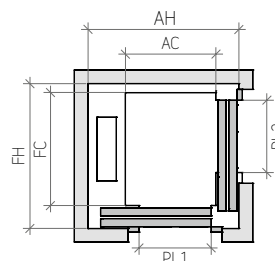
1 ENTRANCE



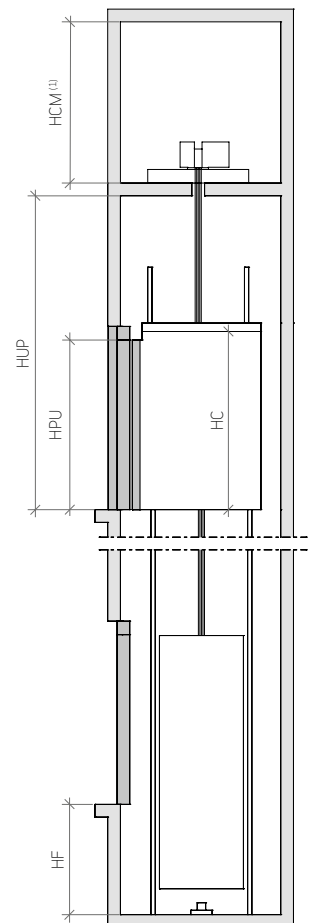
2 ENTRANCES (OPEN THROUGH)



2 ENTRANCES (FRONT & SIDE)

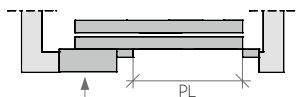


VERTICAL SECTION



(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

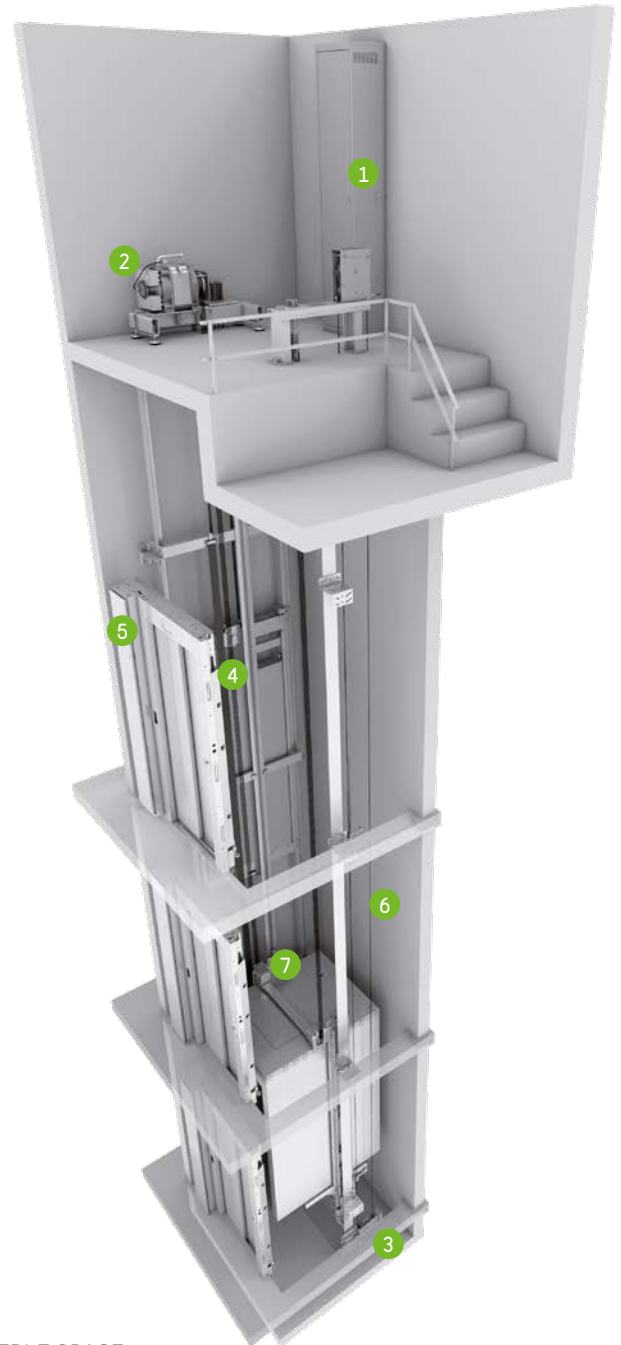
Machine-room above electrical gearless solutions

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.



Orona 3G

X-26

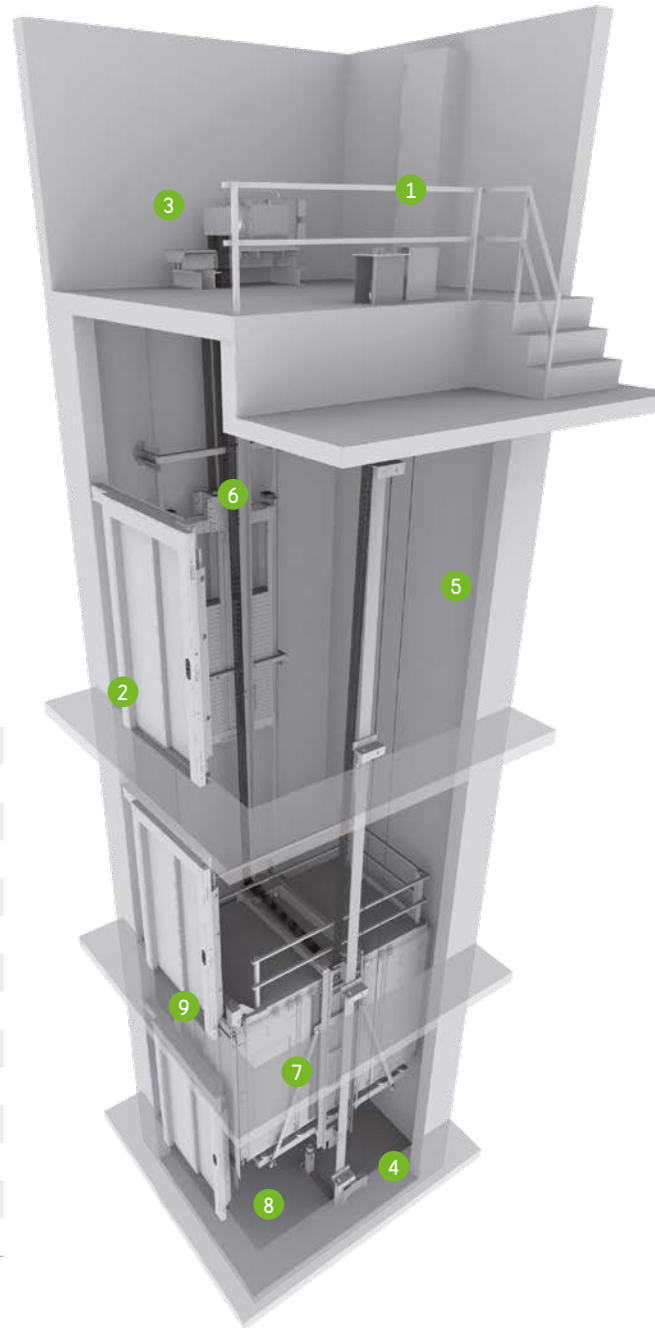
Machine-room above electrical gearless solutions

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

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.



Orona 3G

X-28

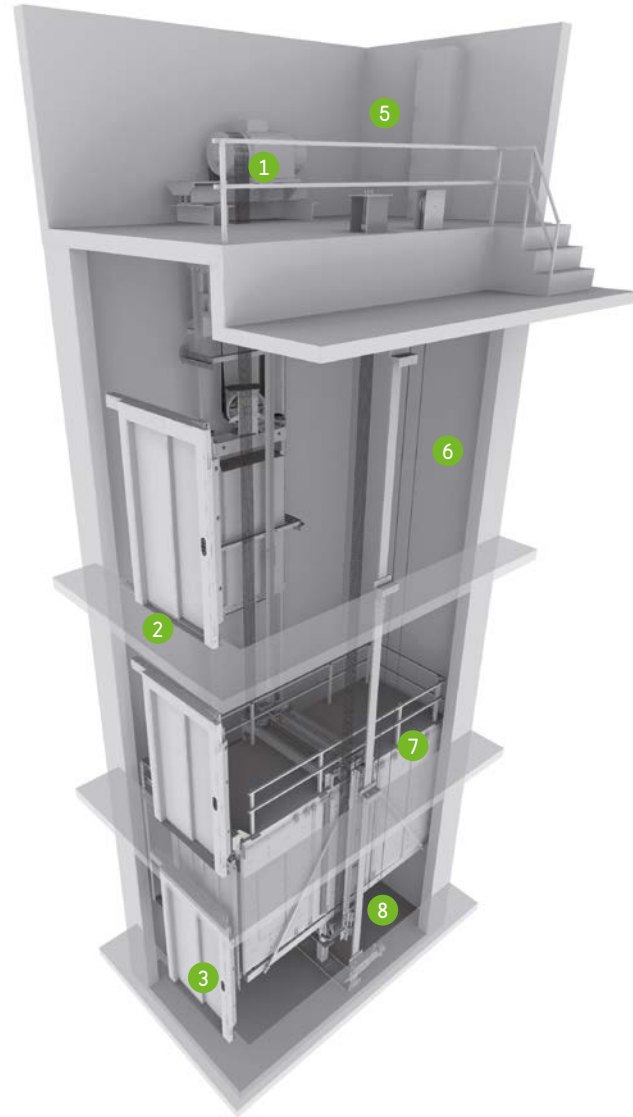
Machine-room above electrical gearless solutions

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	1650 to 2500 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).



Standard dimensions

Load / capacity				Car				Lift shaft *				
Speed			Q Load	AC Width	FC Depth	PL Clear opening	Type	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 180ø	3,150	1,950	1,450	3,400
				2,350	1,700	1,200	CC	1 2 x 180ø		2,050		
				1,500	2,700	1,300	TT	1 2 x 180ø		3,050		
	26	2,000 kg	1,800	2,700	1,300	TT	1 2 x 180ø	2,600	3,260			
			1,800	2,700	1,300	TT	1 2 x 180ø		3,050			
			1,800	2,700	1,300	TT	1 2 x 180ø		3,260			
1 m/s		24	1,800 kg	2,350	1,600	1,200	CC	1 2 x 180ø	3,150	1,950	1,450	3,425
				2,350	1,700	1,200	CC	1 2 x 180ø		2,050		
				1,500	2,700	1,300	TT	1 2 x 180ø		3,050		
	26	2,000 kg	1,800	2,700	1,300	TT	1 2 x 180ø	2,600	3,260			
			1,800	2,700	1,300	TT	1 2 x 180ø		3,050			
			1,800	2,700	1,300	TT	1 2 x 180ø		3,260			
1.6 m/s		24	1,800 kg	2,350	1,600	1,200	CC	1 2 x 180ø	3,150	2,050	1,600	3,565
				2,350	1,700	1,200	CC	1 2 x 180ø		2,260		
				1,500	2,700	1,300	TT	1 2 x 180ø		3,050		
	26	2,000 kg	1,800	2,700	1,300	TT	1 2 x 180ø	2,600	3,260			
			1,800	2,700	1,300	TT	1 2 x 180ø		3,050			
			1,800	2,700	1,300	TT	1 2 x 180ø		3,260			

1 With 2 panel telescopic doors

2 With PVC flooring. Marble floor option + 20 mm

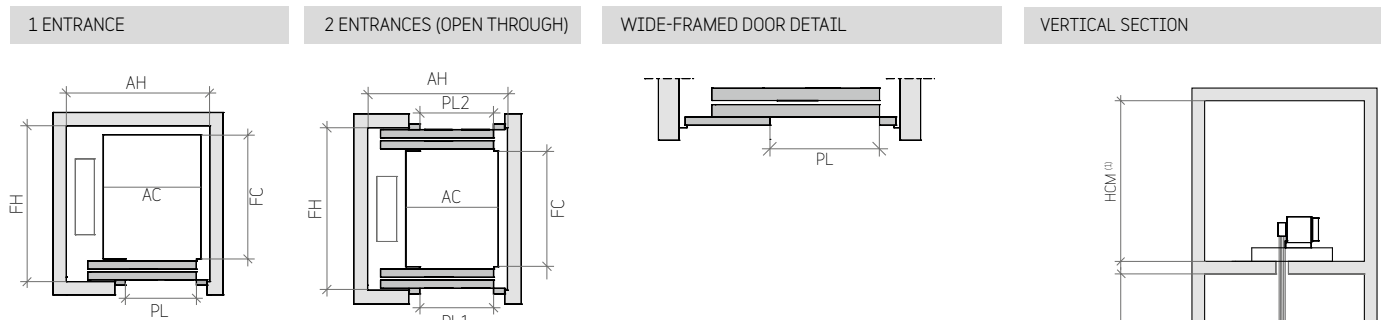
3 HUP minimum for internal car height (HC) 2,100 mm.

CC - Two panel central door

TT - Two panel telescopic door

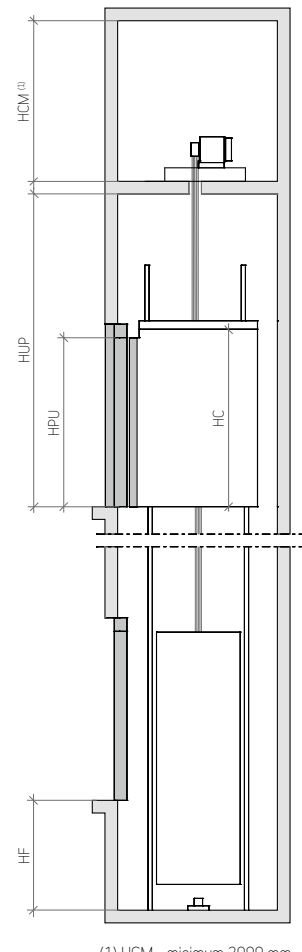
* Minimum plumb measurements

Layout



Customised car dimensions

Car width		Car depth		Clear door opening	
33	2,900	33	2,900	33	2,900
33	2,800	33	2,800	33	2,800
33	2,700	33	2,700	33	2,700
33	2,600	33	2,600	33	2,600
33	2,500	33	2,500	33	2,500
33	2,400	33	2,400	33	2,400
33	2,300	33	2,300	33	2,300
33	2,200	33	2,200	33	2,200
33	2,100	33	2,100	33	2,100
33	2,000	33	2,000	33	2,000
33	1,800	33	1,800	33	1,800
33	1,700	33	1,700	33	1,700
33	1,600	33	1,600	33	1,600
33	1,500	33	1,500	33	1,500
33	1,400	33	1,400	33	1,400



(1) HCM - minimum 2000 mm

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

Orona 3G

X-30

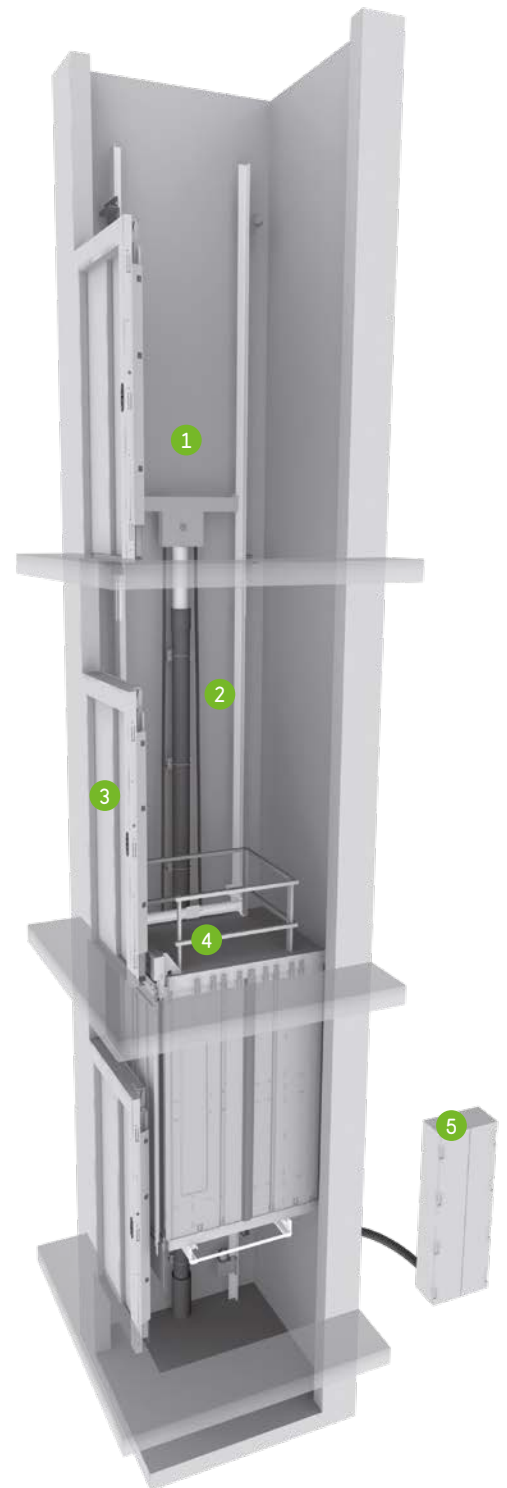
Hydraulic drive solutions

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.



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)				○	° (> 1000 kg)

ACCESS CONTROL

Zone cancelling, coded call	○	○	○	○	○
Compulsory stop at main floor	○	○	○	○	○
External call cancelling	○	○	○	○	○
Automatic car call deletion	○	○	○	○	○
Independent entrance selection	○	○	○	○	○
Non-emergency outage	○	○	○	○	○
Emergency outage	○	○	○	○	○
Forced closure (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	R/V	R	R				V
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(R) With safety cube (V) With safety cube 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

