

# THE MACHINE-ROOM-LESS ELEVATOR

KONE N MonoSpace®



# YOUR TRUSTED ELEVATOR PARTNER

With over 100 years of experience in the elevator business and a strong track record in safety, KONE is your trusted partner dedicated to ensuring smooth People Flow® in your building. We revolutionized the industry in 1996 with the world's first machine room-less elevator – the KONE N MonoSpace® – and the energy-efficient KONE EcoDisc® hoisting machine. Our proven track record, including over 600,000 KONE EcoDisc installations worldwide, speaks for itself.

We have listened to our customers and carefully analyzed each and every part of our industry-leading elevator solution, and renewed it from top to bottom. Everything we did best, we've made even better.



## 3 REASONS TO CHOOSE KONE N MONOSPACE

### 1 EXCELLENT ECO-EFFICIENCY THAT CUTS THE CARBON FOOTPRINT OF YOUR BUILDING

Up to 28 % more energy-efficient than before thanks to the upgraded KONE EcoDisc, centralized hoisting, and more advanced standby solutions





#### A STRONG TRACK RECORD

- **9 out of 10** KONE customers recommend us as a partner
- **More than 100** years of experience in the elevator industry
- **Over 600,000** KONE EcoDisc elevator installations worldwide
- **Over 950,000** elevators and escalators in service
- **40,000** dedicated experts worldwide

## 2 SMOOTH RIDE COMFORT FOR THE BEST POSSIBLE PASSENGER EXPERIENCE

**Quality guaranteed** through ride-comfort testing of all elevators before handover – a service unique to KONE

Quiet and smooth operation, and accurate leveling enabled by:

- The renewed KONE EcoDisc hoisting machine, brakes, and centralized hoisting
- An improved car structure and sound-isolated guide shoes

## 3 AWARD-WINNING DESIGN THAT HELPS YOUR BUILDING STAND OUT

**Easy selection of car interiors** from a collection of functional and visually appealing designs created by KONE's award-winning design professionals

**The industry's most flexible and versatile** offering, with over 100 materials and accessories, offering millions of possible combinations

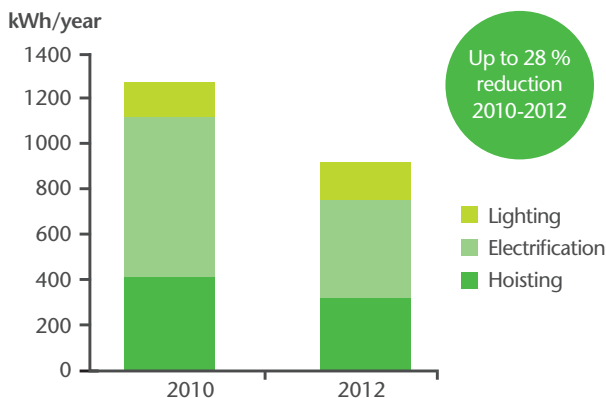
**The most innovative materials and lighting solutions**

# EXCELLENT ECO-EFFICIENCY

## THAT CUTS YOUR BUILDING'S CARBON FOOTPRINT

At KONE we have always been renowned for our revolutionary eco-efficient technology. Our renewed elevator solution improves upon our already industry leading energy consumption levels by up to 28%.

### KONE elevator's energy consumption



The basis for the calculation is an elevator speed of 1 m/s, a load of 1000 kg, 150,000 starts/year, a travel height of 12 m and 5 floors

Installing an eco-efficient KONE elevator solution can also help in achieving green **building accreditations** such as **LEED** or **BREEAM** certification.

#### SAVE ENERGY, SAVE SPACE

As well offering excellent energy efficiency, because the new KONE N MonoSpace® also helps you save valuable space.

- The highly compact elevator equipment – including the KONE EcoDisc hoisting machine and other mechanical structures – now requires even less height and width in the shaft.
- This **freed up valuable floor space** or allows for a more spacious, higher-capacity car.
- When replacing an existing elevator, the new KONE N MonoSpace **eliminates the need for a machine room** and **maximizes elevator capacity** within the existing shaft dimensions.

### 1 More efficient hoisting machinery

The completely renewed KONE EcoDisc® hoisting motor and highly efficient drive system delivers even better energy efficiency, helping to reduce both operating costs and your building's carbon footprint.

### 2 Eco-efficient regenerative drive

Our latest regenerative drive recycles energy for immediate reuse within the building and cuts consumption by up to 20%\*.

### 3 Long-lasting LED lighting

As well as being up to 80%\* more efficient than halogen lighting, LED lighting also lasts up to 10 times longer\*.

### 4 More advanced standby solutions

Upgraded standby solutions power down the equipment when it is not in use, providing substantial energy savings.

\* The calculation is based on an elevator speed of 1 m/s, a load of 1000 kg, 150,000 starts/year, a travel height of 12 m and 5 floors.



U.S. based business magazine Forbes has ranked KONE the 48<sup>th</sup> most innovative company in the world. KONE is the only elevator and escalator company featured on Forbes' list this year.



# SMOOTH RIDE COMFORT

## FOR THE BEST POSSIBLE PASSENGER EXPERIENCE

Every aspect of the upgraded KONE MonoSpace® is designed to add real value to your building and maximize comfort, safety, and convenience for passengers. The renewed KONE EcoDisc® hoisting machine is complemented by a wide range of other upgrades that are designed to deliver industry-leading ride comfort year after year.

### 1 Renewed machinery and brakes

- The new, highly reliable motor control system further improves ride comfort, with smooth acceleration and deceleration, and highly accurate car leveling.
- The renewed braking system ensures a comfortable, safe, quiet ride, while also minimizing noise transfer to the surrounding areas.
- The new brake test functionality automatically checks brake condition daily. This helps to further improve safety and reliability.

### 2 Redesigned hoisting system for minimized vibration and noise

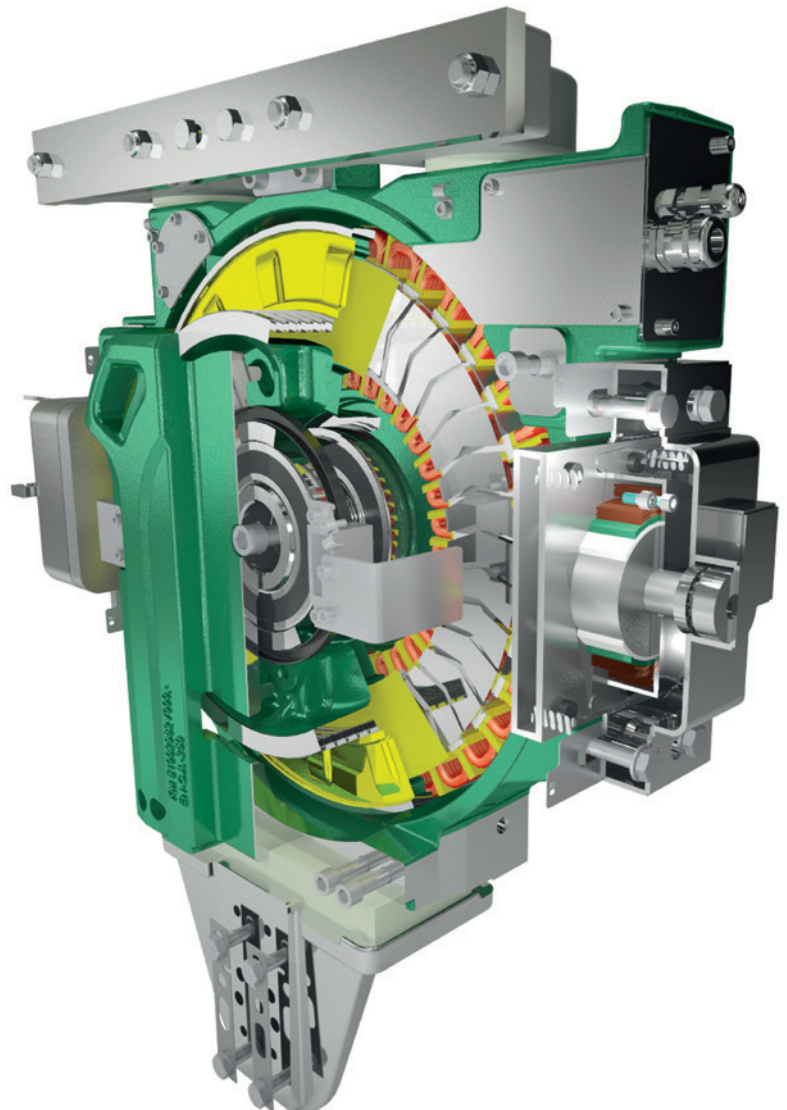
- Centralized, low-friction hoisting cuts noise and vibration, improving comfort for passengers and minimizing disturbance to the surrounding areas.

### 3 Improved car structure with even better noise isolation

- The rigid structure and superb noise isolation of the renewed elevator car ensure a smooth, quiet ride.
- Isolated guide shoes, constructed using low-noise sliding material, further help to reduce noise.

#### ALL ELEVATORS TESTED FOR RIDE QUALITY – A SERVICE UNIQUE TO KONE

- KONE provides a comprehensive ride quality testing service as standard for all its elevator installations.
- Your elevator will not be handed over for use before it passes this test, which measures noise and vibration levels inside the car.
- This thorough quality and reliability testing prior to handover further reduces the need for unplanned maintenance callouts.





# AWARD-WINNING DESIGN

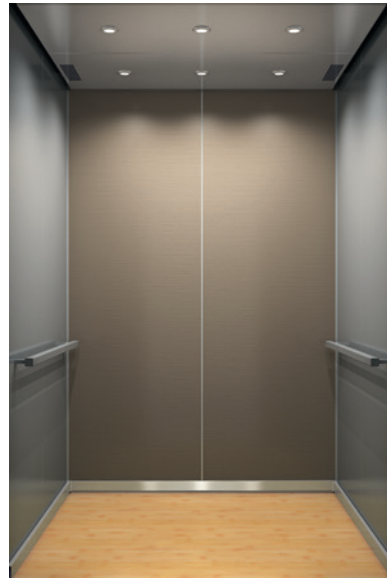
THAT HELPS YOUR BUILDING  
STAND OUT

## WHAT SETS KONE DESIGN APART

- 1 Easy selection of car interiors**  
A collection of 52 functional and visually appealing designs created by KONE's award-winning design professionals.
- 2 The most flexible and versatile offering**  
100 different materials and accessories that can be combined freely and used in all elevator products, for both new buildings and modernization projects.
- 3 The most innovative materials**  
The combination of unique textured, patterned, and 3D-effect wall materials with novel lighting solutions creates a stunning visual effect.
- 4 Award-winning design**  
KONE's elevator and signalization design concepts have received both Red Dot and Good Design awards.







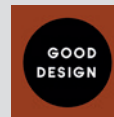
## KONE DESIGN COLLECTION

Regardless of the type of building you are developing, the elevator you choose should complement your building's look and feel, create a lasting impression on passengers, and make your building attractive to potential tenants. Your elevator also needs to be functional – it should be accessible for all, well lit, user-friendly, easy to clean, and resistant to wear and tear.

The new KONE Design Collection – created by our award-winning design team – offers you a versatile set of contemporary, themed interiors to choose from.

You can also create your own unique look and feel by mixing and matching our wide range of materials and accessories.

For more design inspiration take a look at the complete KONE Design Collection and use the KONE Car Designer tool together with a KONE sales representative.



reddot design award  
winner 2012

2 Good Design awards  
4 Red Dot design awards

## ACCESSORIES DESIGNED TO IMPROVE USER EXPERIENCE

Our wide range of accessories is designed to give passengers a great elevator experience with every trip.

As well as adding the finishing touches to your elevator's interior, they make using the elevator even easier and more convenient for passengers.

1. Car operating panel with memorable animal patterns to help children find their floor (KDS D).
2. Designed for senior housing, this car operating panel uses clear, highly visible numbers (KDS D).
3. Our new KSS 280 signalization series is durable, easy to use, and cost competitive.
4. KONE InfoScreen makes it easy to communicate important building information to tenants and visitors.



1



2



3



4

# SUPPORTING YOU EVERY STEP OF THE WAY

Choose a partner with over a century of experience in delivering pioneering elevator solutions. Get expert advice from professionals and enjoy the peace of mind that comes with comprehensive support. KONE is with you every step of the way – from planning and design through installation and maintenance to modernization – for the entire life cycle of your building.



## 1 Expert design and planning services

- Expert planning advice helps you specify the optimal elevator solution for your building requirements.
- Easy-to-use online design tools save you time and effort during the design process by allowing you to create CAD drawings, 3D BIM models, and custom car interiors.
- Energy consumption calculations for every individual elevator solution.



## 2 Safe and efficient installation

- Highly efficient scaffoldless installation methods result in considerable cost savings for our customers and minimize disruptions to other construction work.
- Strict quality criteria for each phase of installation – ensuring “first time right every time”.
- Continuous training, site audits, safety passports, and proven methods ensure maximum site safety.
- Eco-efficient installation processes maximize waste recycling and minimize the use of solvents.



## 3 Quality assurance at handover and professional maintenance

- We are the only company to provide in-depth ride quality testing of each elevator before hand over.
- Our elevators are known for their reliability, and have an average availability rate of 99%.
- Our global spares center stocks over 150,000 parts and offers 24-hour delivery for the most commonly requested parts.
- Preventive KONE Care™ maintenance solutions – including a comprehensive new online service-reporting system – make it easier to monitor and budget for elevator maintenance.

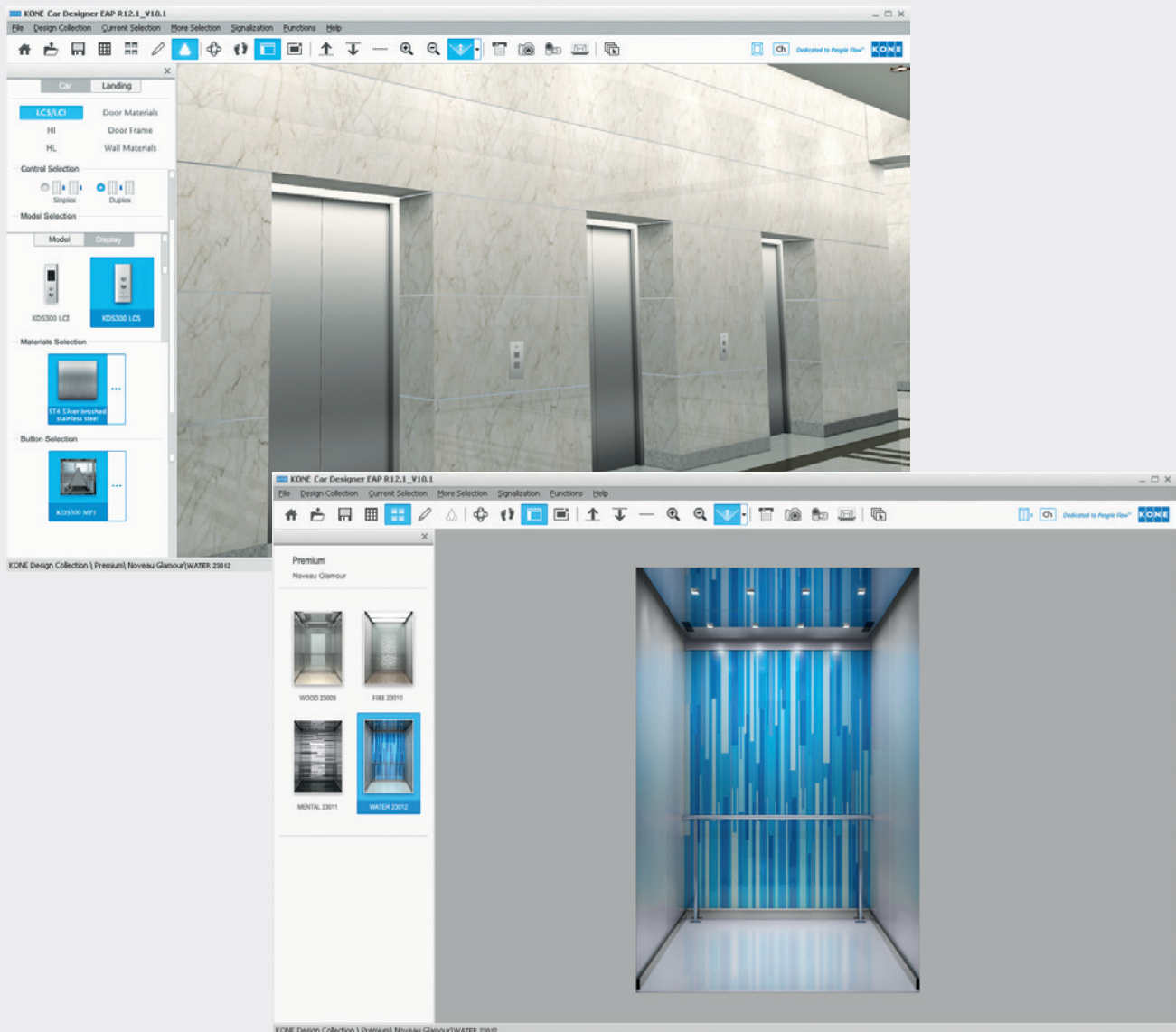


# WORLD-CLASS DESIGN TOOLS

Take advantage of our easy-to-use tools for planning your elevators and designing a car that will fit your building's look and feel perfectly.

## KONE Elevator toolbox

- With the **KONE Elevator Toolbox** you can create a detailed elevator specification online and create customized CAD drawings for preliminary planning.



## KONE Car Designer – now including new designs, materials, and accessories

- Create your own elevator car design together with a KONE sales representative with the **KONE Car Designer**.
- **Choose a theme** from the KONE Design Collection, or **mix and match** your choice of materials, lighting, and accessories **to create a totally new look**.
- Once your design is ready, the KONE sales representative will send it to you as a PDF so you can share it with colleagues.

# NO COMPROMISES ON SAFETY

When you choose KONE, you choose peace of mind. Safety is the starting point for every KONE solution, and all our solutions include the latest innovations in safety technology as standard.

Our completely renewed KONE MonoSpace elevator solution includes a wide range of features that are designed to both maximize safety for passengers and make it easy for you to inspect the condition of your equipment to ensure that it operates safely at all times.

- Daily **automatic brake testing**
- **Proven rope technology** that is easy to inspect
- A curtain of light to ensure **safe entry and exit**
- **Accurate landing** that eliminates risk of tripping
- **24/7 contact** with the **KONE service center** in case of emergency

KONE also demonstrates its strong commitment to safety by working closely with the people who rely on our products to provide a safe, comfortable experience in their daily lives. Our annual safety events give people the opportunity to familiarize themselves with how elevators operate and how to use an elevator safely.

## STANDARDS-COMPLIANT MANUFACTURING

### Standards-compliant manufacturing

- All KONE manufacturing units are ISO 14001 certified and meet all relevant elevator industry standards and requirements







# AWARDS AND CERTIFICATIONS

- 08/2015** KONE ranked as one of the world's most innovative companies, by the U.S. -based business magazine Forbes. KONE's ranking is now 48<sup>th</sup>, and out of all European companies listed this year, KONE was ranked an impressive sixth. KONE is the only elevator and escalator company featured on Forbes' list this year.
- 08/2014** KONE ranked as one of the world's most innovative companies, by the U.S. -based business magazine Forbes. KONE's ranking is 42<sup>th</sup>.
- 08/2013** KONE ranked as one of the world's most innovative companies, by the U.S.-based business magazine Forbes. KONE's ranking is 37 and of the European companies listed, KONE ranked as 12.
- 10/2011** KONE features for the first time in the Carbon Disclosure Project's (CDP) Nordic Carbon Disclosure Leadership Index.
- 08/2011** KONE is the only elevator and escalator company to make the top 50 of US-based business magazine Forbes global list of the 100 most innovative companies in the world.
- 07/2010** KONE becomes the first company in the elevator and escalator industry to achieve an A-class energy rating according to the VDI 4707 standard, for the KONE MonoSpace® elevator.
- 06/2009** KONE awarded a Prime Award for Eco-Business by Prime Magazine. Co-organized by Prime Magazine and the Business Environment Council, the award is given to companies who demonstrate outstanding achievements in environmental protection.
- 01/2008** KONE chosen as one of the 2007 Annual Top 10 International Brands for China Energy-Efficient Buildings by the China Ministry of Construction.
- 12/2007** KONE awarded 2007 Best Real Estate Supplier at the China International Real Estate & Architect Fair (CIHA F). KONE MonoSpace® recommended as one of the 2007 Recommended Components & Products for Energy-Saving Construction.
- 12/2005** KONE MonoSpace cited by Legambiente Lombardia (Environmental Coalition of Lombardy), the government of the Region of Lombardy, the Technical University of Milan, and Bocconi University for environmental friendliness at the fifth annual Friend of the Environment Awards for Innovation. These awards are given for Efficiency in Consumption and Eco-design: solutions for sustainable development.
- 06/2005** 100,000<sup>th</sup> KONE MonoSpace elevator installed in the National Grand Theater, Beijing, China.
- 07/2003** KONE wins Premio Quartrium Award for originality, Spain.
- 03/2000** KONE solutions chosen for Thermo-Staete, the most energy-efficient office building in the Netherlands.
- 04/1999** KONE wins Construmat 1999 Prize for Innovative Technology, Barcelona, Spain.
- 02/1999** KONE solutions chosen for "Eyecatcher", a Swissbau showcase green building, Switzerland.
- 03/1998** KONE wins Electrical Industry's (SE T) Annual Award, Finland.
- 10/1997** KONE wins Top Prize for Innovation at the SAIE '97 Fair, Bologna.
- 06/1997** KONE wins the Grand Prix '97 at the CONECO fair, Bratislava, Slovakia.
- 09/1996** KONE wins the Grand Prix at the Building Fair, Prague.



# REFERENCES



Beijing Olympic village, China



The River, Bangkok, Thailand



Blue Ridge, Pune, India



Sunrise Point, Kolkata, India





Royal Children's Hospital, Melbourne, Australia



Hongqiao International Airport and Transportation Junction, Shanghai, China



Somerset@313, Singapore



Celebrity Eclipse

# PLANNING DATA

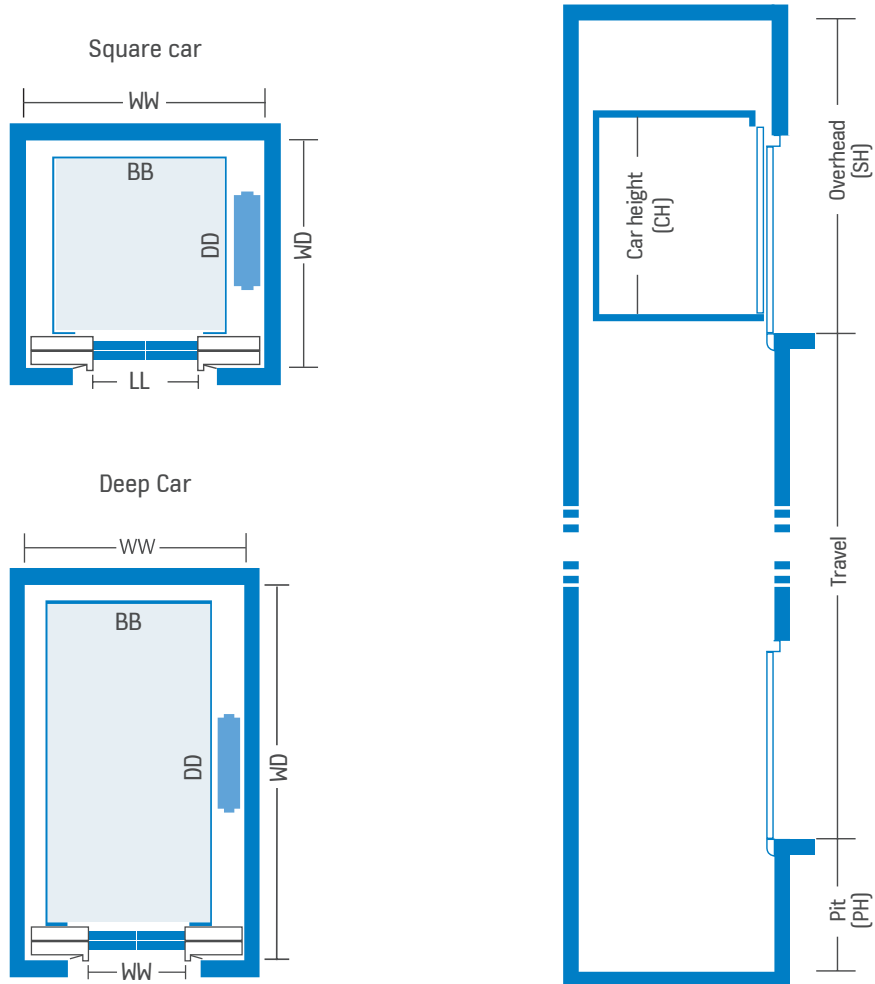
KONE N MONOSPACE BASIC DIMENSIONS											
Persons/ rated load (kg)	Speed (m/s)	Travel (m)	Car size BB×DD (mm)	Door type	Car type	LL (mm)	LR (mm)	NOM		MAX	
								WW (mm)	WD (mm)	WW (mm)	WD (mm)
4/320	≤ 1.75	≤ 75	900 × 1000	SO	SEC	700	900	1450	1390	1720	2030
	≤ 1.75	≤ 75	900 × 1000	SO	SEC	800	1000	1500	1390	1720	2030
5/400	≤ 1.75	≤ 75	950 × 1100	SO	SEC	700	900	1500	1490	1770	2130
	≤ 1.75	≤ 75	950 × 1100	SO	SEC	800	1000	1500	1490	1770	2130
6/450	≤ 1.75	≤ 65	1100 × 1150	SO	SEC	700	900	1650	1540	1920	2180
	≤ 1.75	≤ 65	1100 × 1150	SO	SEC	800	1000	1650	1540	1920	2180
	≤ 1.75	≤ 65	1100 × 1150	CO	SEC	800	1000	1750	1440	1930	2080
8/630	≤ 1.75	≤ 75	1400 × 1100	CO	SEC	800	1000	1920	1470	2220	2030
	≤ 1.75	≤ 75	1400 × 1100	CO	SEC	900	1100	1950	1470	2220	2030
	≤ 2.0	≤ 90	1100 × 1400	CO	SEC	800	1000	1790	1835	1925	2390
	≤ 2.0	≤ 90	1100 × 1400	CO	SEC	900	1100	1950	1835	2025	2390
	≤ 2.5	≤ 90	1200 × 1300	CO	SEC	800	1000	1880	1835	2305	2290
	≤ 2.5	≤ 90	1200 × 1300	CO	SEC	900	1100	1950	1835	2305	2290
10/800	≤ 1.75	≤ 75	1200 × 1600	CO	TTC	800	1000	1875	2010	2140	2010
	≤ 1.75	≤ 75	1200 × 1600	CO	TTC	900	1100	1960	2010	2140	2010
	≤ 2.0	≤ 90	1100 × 1650	CO	SEC	800	1000	1750	1965	1925	2640
	≤ 2.0	≤ 90	1100 × 1650	CO	SEC	900	1100	1950	1965	2025	2640
	≤ 2.0	≤ 90	1100 × 1650	SO	SEC	800	1000	1660	2065	1925	2740
	≤ 2.0	≤ 90	1100 × 1650	SO	SEC	900	1100	1690	2065	1925	2740
	≤ 2.0	≤ 90	1100 × 1650	SO	SEC	1000	1200	1840	2065	1925	2740
	≤ 2.5	≤ 90	1350 × 1400	CO	SEC	800	1000	2030	1835	2455	2390
12/900	≤ 2.5	≤ 90	1350 × 1400	CO	SEC	900	1100	2030	1835	2455	2390
	≤ 2.5	≤ 90	1350 × 1600	CO	SEC	800	1000	1960	1935	2455	2590
	≤ 2.5	≤ 90	1350 × 1600	CO	SEC	900	1100	1960	1935	2455	2590
	≤ 2.5	≤ 90	1500 × 1400	CO	SEC	800	1000	2180	1835	2605	2390
13/1000	≤ 2.0	≤ 90	1100 × 2100	CO	SEC	900	1100	1950	2415	2025	3090
	≤ 2.0	≤ 90	1100 × 2100	CO	TTC	900	1100	1950	2510	2025	2510
	≤ 2.0	≤ 90	1100 × 2100	SO	SEC	900	1100	1690	2515	1925	3190
	≤ 2.0	≤ 90	1100 × 2100	SO	TTC	1000	1200	1840	2710	1925	2710
	≤ 2.5	≤ 90	1600 × 1500	CO	SEC	900	1100	2280	1885	2705	2490
	≤ 2.5	≤ 90	1600 × 1400	CO	SEC	900	1100	2280	1835	2705	2390
	≤ 2.5	≤ 90	1400 × 1600	CO	SEC	900	1100	2010	1935	2505	2590
15/1150	≤ 2.0	≤ 90	1800 × 1450	CO	SEC	1000	1200	2445	1860	2625	2440
	≤ 2.0	≤ 90	1800 × 1450	CO	SEC	1100	1300	2445	1860	2625	2440
	≤ 2.0	≤ 90	1700 × 1500	CO	SEC	1000	1200	2345	1885	2525	2490
	≤ 2.0	≤ 90	1300 × 2100	CO	SEC	1000	1200	2150	2415	2225	3090
	≤ 2.0	≤ 90	1300 × 2100	CO	TTC	1000	1200	2150	2510	2225	2510
	≤ 2.0	≤ 90	1500 × 1800	CO	SEC	1000	1200	2150	2115	2325	2790
18/1350	≤ 1.75	≤ 40	1400 × 2100	CO	SEC	900	1100	2050	2400	2450	3000
	≤ 1.75	≤ 40	1400 × 2100	CO	SEC	1000	1200	2150	2400	2450	3000
	≤ 1.75	≤ 40	1400 × 2100	CO	SEC	1100	1300	2350	2400	2450	3000
	≤ 1.75	≤ 40	1500 × 2000	CO	SEC	900	1100	2150	2300	2550	2900
	≤ 1.75	≤ 40	1500 × 2000	CO	SEC	1000	1200	2200	2300	2550	2900
	≤ 1.75	≤ 40	1500 × 2000	CO	SEC	1100	1300	2350	2300	2550	2900
	≤ 1.75	≤ 40	1600 × 1800	CO	SEC	900	1100	2250	2180	2650	2700
	≤ 1.75	≤ 40	1600 × 1800	CO	SEC	1000	1200	2300	2180	2650	2700
	≤ 1.75	≤ 40	1600 × 1800	CO	SEC	1100	1300	2400	2180	2650	2700
	≤ 1.75	≤ 40	2000 × 1500	CO	SEC	900	1100	2650	2030	3050	2400
	≤ 1.75	≤ 40	2000 × 1500	CO	SEC	1000	1200	2650	2030	3050	2400
	≤ 1.75	≤ 40	2000 × 1500	CO	SEC	1100	1300	2650	2030	3050	2400

For more information please refer to technical documentation



OVERHEAD AND PIT DIMENSIONS						
Speed (m/s)	Rated load (kg)	Car height CH (mm)	Minimum headroom height, SH (mm)	Maximum headroom height, SH (mm)	Minimum pit height, PH (mm)	Maximum pit height, PH (mm)
1.0	< 1350	2100	3580	5000	1220	1800
1.6	< 1350	2100	3770	5000	1350	2500
1.75	< 1350	2100	3790	5000	1350	2500
1.0	< 1350	2200 – 2700	CH + 1380	5000	1220	1800
1.6	< 1350	2200 – 2700	CH + 1570	5000	1350	2500
1.75	< 1350	2200 – 2700	CH + 1590	5000	1350	2500
2.0	≤ 1150	2100 – 2700	CH + 1800	5000	1500	2500
2.5	≤ 1000	2100 – 2700	CH + 2050	5200	1800	2500
1.0	1350	2100 – 2700	CH + 1400	5000	1350	1800
1,6	1350	2100 – 2700	CH + 1600	5000	1450	2500
1.75	1350	2100 – 2700	CH + 1600	5000	1450	2500

Speed	1.0 m/s, 1.6 m/s, 1.75 m/s, 2.0 m/s, 2.5 m/s
Load	320, 400, 450, 1350 kg (Rated speed ≤ 1.75m/s) 630, 800, 900, 1000 kg (Rated speed ≤ 2.5m/s) 1150 kg (Rated speed ≤ 2.0m/s)
Max. stops	18 (1.0 m/s), 28 (1.6 m/s, 1.75m/s), 36 (2.0 m/s, 2.5 m/s)
Max. travel	55 (1.0 m/s), 75 (1.6 m/s, 1.75m/s), 90 (2.0 m/s, 2.5 m/s)
Car height [CH]	2100, 2200, 2300, 2400, 2500, 2600, 2700 mm





KONE provides innovative and eco-efficient solutions for elevators, escalators, automatic building doors and the systems that integrate them with today's intelligent buildings.

We support our customers every step of the way; from design, manufacturing and installation to maintenance and modernization. KONE is a global leader in helping our customers manage the smooth flow of people and goods throughout their buildings.

Our commitment to customers is present in all KONE solutions. This makes us a reliable partner throughout the life cycle of the building. We challenge the conventional wisdom of the industry. We are fast, flexible, and we have a well-deserved reputation as a technology leader, with such innovations as KONE MonoSpace®, KONE NanoSpace™ and KONE UltraRope®.

KONE employs close to 50,000 dedicated experts to serve you globally and locally.

**KONE Corporation**  
**[www.kone.com](http://www.kone.com)**

## KONE OFFICES IN SOUTH EAST ASIA

### Indonesia - PT. KONE Indo Elevator

Jakarta (main office)	+61 21 6570 3990
Bali	+62 361 895 7806
Bandung	+62 22 8606 0804
Makassar	+62 411 466 2780
Surabaya	+62 31 855 6383
Yogyakarta	+62 274 284 0089

**[www.kone.co.id](http://www.kone.co.id)**

### Malaysia - KONE Elevator (M) Sdn Bhd

Kuala Lumpur (main office)	+603 7494 7500
Johor Bahru	+607 559 0885
Penang	+604 656 3222
Sabah	+6015 4818 9128

**[www.kone.my](http://www.kone.my)**

### Philippines - KPI Elevators, Inc.

Makati City (main office)	+632 811 2929
Cebu	+63 32 233 5790

**[www.kone.ph](http://www.kone.ph)**

### Singapore - KONE Pte Ltd

Singapore	+65 6424 6246
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**[www.kone.sg](http://www.kone.sg)**

### Thailand - KONE Public Company Limited

Bangkok	+66 2784 6500
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**[www.kone.co.th](http://www.kone.co.th)**

### Vietnam - KONE Vietnam LLC

Ho Chi Minh (main office)	+84 8 3997 5373
Hanoi	+84 4 3974 9445

**[www.kone.vn](http://www.kone.vn)**

## DISTRIBUTORS IN SOUTH EAST ASIA

### Brunei

Yusoki Sdn Bhd	+673 2790037
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### Cambodia

Comin Khmere	+855 23 885 640
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### Laos

Comin Asia	+856 30 777 4777
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### Myanmar

Octagon Automobile & Machinery Services Co., Ltd	+95 9 8631438
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### Sarawak(Malaysia)

Elebest Engineering Sdn Bhd	+60 82 365836
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