

# KONE S MINISPACE™ - COMPACT AND RELIABLE

Kone is the industry leader in elevator and escalator innovation, we have continued our long history of innovative solutions for People Flow™ with the creation of the KONE S MiniSpace™ – a versatile elevator with a compact machine room that is ideal for offices, hotels and residential buildings. Powered by the revolutionary KONE EcoDisc®, it guarantees reliable operation, reduced noise levels, and provides outstanding performance for generations to come.

#### Less space, faster construction

With KONE S MiniSpace, the machine room is simply an extension of the elevator shaft, making it easier and more cost-efficient to install.

#### Impressive energy savings

KONE S MiniSpace elevators consume less energy and result in lower thermal losses than traditional machines.

#### Attractive interior design

Our elevator design concepts are the work of renowned professionals and designers, who unite attractive interiors with practical durability.

#### Excellent service from planning to maintenance

KONE offers full service throughout your building's lifecycle. From our expert traffic analysis to our flexible KONE Care™ maintenance plans and modernization services, we keep things running smoothly, safely and efficiently.

#### A smooth and quiet ride

The V3F variable-frequency drive ensures a smooth, comfortable ride with superior acceleration/ deceleration profile, better floor-to-floor travel times, and precision leveling.

#### Industry standards and requirements

All KONE manufacturing units are ISO 14001 certified and meet all elevator industry standards and requirements, including:

- EN81-20
- GB7588-2003 (EN81-1:1998)
- EN81-70 and EN81-72/GB26465
- FN81-73
- GOST and PUBEL codes
- Singapore CP2 Code

KONE S MINISPACE ELEVATOR RANGE				
Max travel:	Up to 63 floors and 150 meters of travel			
Max load:	Up to 1600 kg			
Max speed:	Up to 3.0 m/s			
Group size:	Up to 8 cars in 1 elevator group			
Car height:	Up to 3000 mm, TTC* available			

<sup>\*</sup> TTC = Through Type Car (front and rear opening)



## ELEVATOR SPECIFICATION IN THREE SIMPLE STEPS

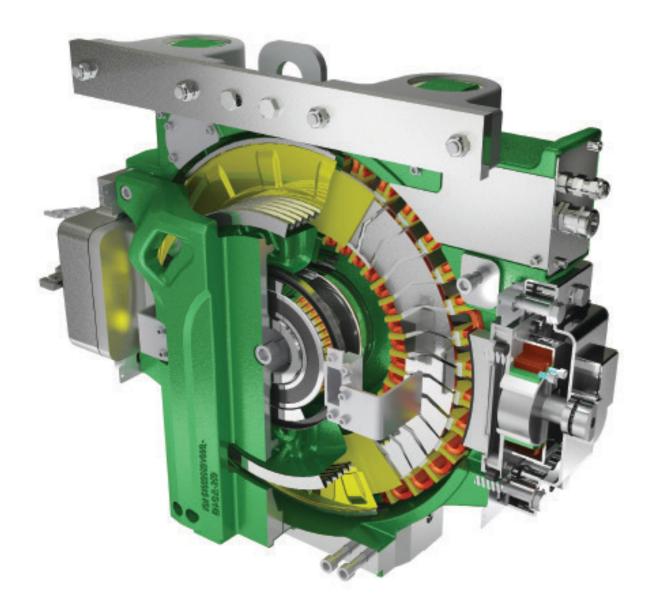
Specifying the optimal elevator solution for your needs takes just three simple steps:

- Specify your elevator based on the expected People Flow™ and size of your building.
- Choose a car design to suit your building interior from our professionally designed interiors or create a custom look and feel by choosing from the wide selection of materials in the KONE Design Collection.
- Select additional options together with your sales representative to further enhance your elevator solution.

### TAKING ECO-EFFICIENCY TO NEW HEIGHTS

Save energy, save costs. It is a simple calculation with impressive results. KONE MiniSpace™ elevators, powered by the KONE EcoDisc® hoisting motor, consume less energy than other gearless elevators. KONE EcoDisc also results in lower thermal losses than traditional machines, bringing direct savings in terms of cooling and ventilation costs.

A more efficient hoisting motor is not the only way to reduce the total energy consumption of an elevator. KONE has analyzed every function and option in order to squeeze the total energy consumption.



#### A green hoisting system

The KONE EcoDisc® hoisting machine made DC gearless and energy-hungry geared hoisting machines obsolete. The KONE EcoDisc permanent magnet synchronous machine, together with a vector-controlled drive system and energy regeneration options, provides the highest total efficiency and minimizes both mechanical and electrical losses.

#### Regenerative drive

When the car is descending with a heavy load (or ascending with a light load), it contains potential energy. The regenerative drive recovers this energy, saving up to 30% of the total energy consumed by a typical 13-person KONE elevator.

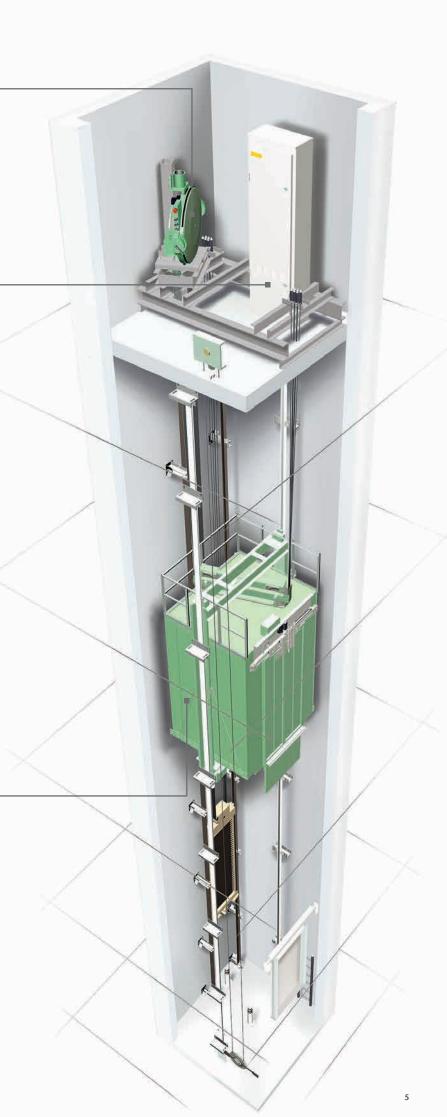
#### Further energy savings with standby mode

Lights, signalization, and ventilation can consume a considerable amount of energy even when the elevator is not moving. In a residential elevator witha low usage rate, this can represent a considerable portion of yearly energy costs. KONE offers the following options to minimize energy consumption:

- Automatic car light operation turns off the lights automatically when the car is not in use and on again when the car is called.
- 2. Corridor illumination control automatically controls the light on the destination floor.
- 3. The power stage of the drive is set to sleep mode when not in use.
- 4. Signalization displays are dimmed when not in use.
- 5. The car fan is turned off when the elevator is not in use.

#### Eco-efficient car lighting

Surprisingly, the car lighting can account for up to 40% (1100 kWh) of an elevator's energy consumption. Halogen spots have been replaced with eco-efficient, long-lasting LED and modern fluorescent lighting technology. The lights are optimized for maximum efficiency and natural color saturation. LED lights last up to 10 times longer than traditional halogen bulbs and use up to 80% less energy.



### AWARD-WINNING DESIGN

THAT HELPS YOUR BUILDING STAND OUT

### WHAT SETS KONE DESIGN APART

- Easy selection of car interiors

  A collection of 52 functional and visually appealing designs created by KONE's award-winning design professionals.
- The most flexible and versatile offering

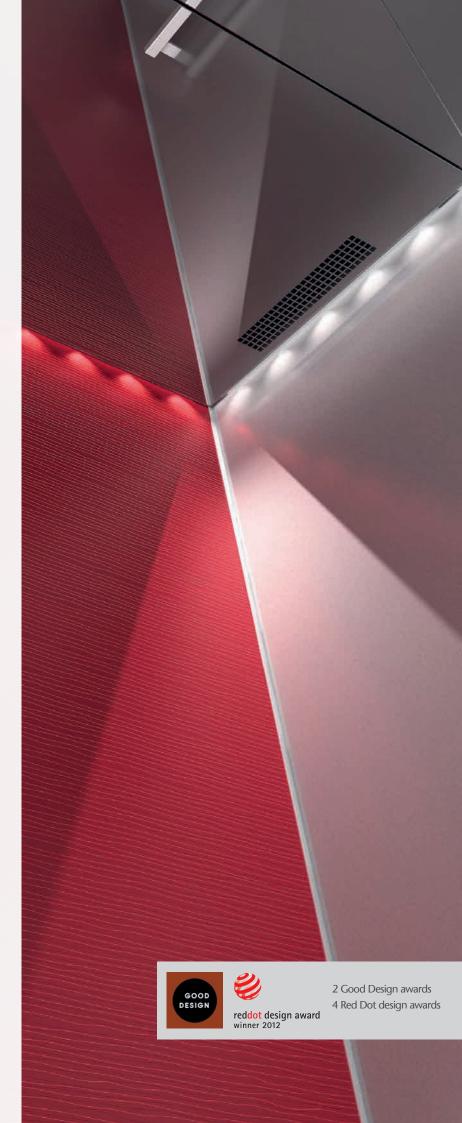
  100 different materials and accessories that can be combined freely and used in all elevator products, for both new buildings

and modernization projects.

- The most innovative materials

  The combination of unique textured, patterned, and 3D-effect wall materials with novel lighting solutions creates a stunning visual effect.
- Award-winning design

  KONE's elevator and signalization design concepts have received both Red Dot and Good Design awards.



## SOLUTIONS FOR SMARTER AND SMOOTHER PEOPLE FLOW

KONE's comprehensive and flexible People Flow Intelligence solutions are designed to ensure smooth people flow in and around buildings while simultaneously providing improved security and access control. They are based on industry-leading technology that can be adapted according to your changing needs, adding real value to your property.

KONE People Flow Intelligence comprises solutions for access and destination control, as well as information communication and equipment monitoring.

#### Destination

Destination control systems for increased elevator performance and passenger comfort.

#### **Access**

Access control systems for increased building security

#### Information

Systems for information sharing inside elevators and in lobby areas.

#### Monitoring

Systems for monitoring and managing elevator and escalator operation.



# EASY INSTALLATION AND FLEXIBLE MAINTENANCE SOLUTIONS

KONE's modern installation methods ensure that elevator installation is safe, fast and cost-efficient. After installation our network of service technicians ensure that the elevator will continue performing optimally for years to come.

#### Innovation through installation

The KONE MiniSpace<sup>™</sup> solution not only saves space and energy throughout its lifetime, but it also saves money during construction. KONE has devised scaffold-less installation methods and special tools to erect the KONE S MiniSpace elevator. When the Site Absolutes are met, the installation process is uninterrupted and requires minimal or no assistance from the builder.

### Save time with Construction Time Use elevators

KONE's Construction Time Use elevators (CTUs) enable safer, more weatherproof, and faster transportation of people and goods on building sites during the construction phase compared with an exterior hoist. After completion of your project, KONE CTU elevators are quickly converted into the building's permanent elevators.

#### **KONE CARE SOLUTIONS**

- KONE Care Standard is a cost-effective solution for reliable and top-quality maintenance that ensures compliance with safety laws and standards.
- KONE Care Plus simplifies maintenance management by making maintenance expenditure more predictable and providing real-time information on maintenance work.
- KONE Care Premium is the recommended solution if disruptions to People Flow would have a major impact on your business. The solution provides a first-class level of service and rapid response times. Maintenance costs are also fully predictable.

#### Excellence in service around the clock

An elevator needs regular maintenance to ensure optimal performance. Our KONE Care™ maintenance solutions take into account the type, age, and usage of your equipment to maximize reliability and safety and minimize downtime and maintenance costs. KONE provides you with service excellence 365 days a year, 24 hours a day and flexible maintenance options to meet your specific needs.



### **KONE REFERENCES**



Coastal View, Residential Compound, Qingdao



Intelligent commercial building, Shanghai



Huasheng Century New Town, Residential compound, Changsha

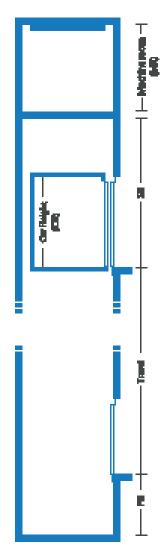


Landlord Butterfly compound, Kunshan



Hospital of Chinese medicine, Suzhou

### **SHAFT DIMENSIONS**



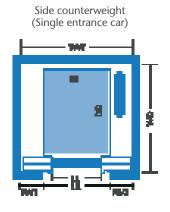
ITEM			SPECIF	ICATION		REMARK	
Speed (m/s)	1.0	1.6	1.75	2.0	2.5	3.0	
Load (kg)	800	800	800	800	800	-	Rear counterweight/
	1000	1000	1000	1000	1000	1000	Side counterweight
	1150	1150	1150	1150	1150	1150	
	1350	1350	1350	1350	1350	1350	
	1600	1600	1600	1600	1600	1600	
Max. travel (m)	55	75	100	110	120/1351)	-	MX14 platform
	-	-	110	135	150	MX18 platform	
Max. stops		3	8		48	63	
Max. units of group control			6		8		
			PT	Passenger: 10 persons, Load: 1000 kg			
			PT	Passenger: 13 persons, Load: 1000 kg			
			PT	Passenger: 15 persons, Load: 1150 kg			
			PT	Passenger: 18 persons, Load: 1350 kg			
		PT21					Passenger: 21 persons, Load: 1600 kg
Car type				ntrance car h type car			
Door opening			Ор	tional			
Door height		2	100/2200	/2300/240	$0^{2)}$		
Door width	800,	900, 1000	), 1100, 13	300 (door c	nly)		
Counterweight safety gear		Ye	s , when sp	peed less 3			
Main power			380 V, 50	HZ, 3 phas			
Lighting power			220 \	/ 50 Hz			
Min. interfloor distance	HH +			), HH + 480 m (base du	) mm (mid di uty),	uty),	

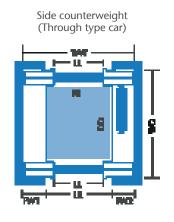
<sup>1) 135</sup> m up to 1000 kg; 120 m for bigger loads

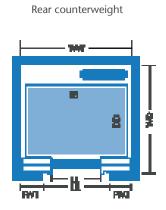
#### Note

For further information regarding to the same size of machine room and shaft, reaction in pit and machine room, and etc, please contact our sales representatives.

#### **SHAFT PLAN**







<sup>&</sup>lt;sup>2)</sup> Car height CH must be greater than Door Height HH

### KONE S MINISPACE™ PLANNING DATA

KONE S MINISPACE™ SMALL MACHINE ROOM (side counterweight)															
TYPE CO	TYPE CODE PT10 PT13			PT15				PT18	PT21						
Load (kg	)		80	0			1000				11	50		1350	1600
Car size (	(mm)	1350	x1400	1400>	(1200	1600	x1400	1600	x1500	1500	x1800	1800:	x1450	2000 x 1500	1400x2400
Door hei	ight (mm)							2	100, 220	0, 2300, 2	2400				
Door wid	dth (mm)	800,	900	80	00	90	00	9	00	90	00	1000,	1100	1000, 1100	1000, 1100
Shaft size	≤ 1.75 m/s	1925	x1900	1975>	k1800	2225	k1900	2175	x1950	1	I)	1	I)	1)	1)
(mm)	2.0 m/s	1950	x1900	1975>	(1850	2250	x1950	2175	x2050	2150	x2150	2500	x1950	1)	2340x2870
	3.0 m/s	Ν	IA	N	Α	1975	k2470	1)	1)	2185	x2470	1)	1)	1)	1)
Car heig	ht (mm)	2280	2400	2280	2400	2280	2400	2280	2400	2280	2400	2280	2400	2400	2400
Over-	1.0 m/s	3750	3900	3750	3900	3750	3900	3750	3900	3750	3900	3750	3900	3830	3830
head height	1.6 m/s	3850	4000	3850	4000	3850	4000	3850	4000	3850	4000	3850	4000	4010	4010
(mm)	1.75 m/s	3900	4050	3900	4050	3900	4050	3900	4050	3950	4050	3950	4050	4100	4100
	2.0 m/s	4050	4150	4050	4150	4050	4150	4050	4150	4050	4150	4050	4150	4170	4200
	2.5 m/s	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500	4500
	3.0 m/s	NA	NA	NA	NA	4950	4950	4950	4950	4900	4900	4900	4900	4900	4950
Pit depth	1.0 m/s					1360					14	20		1270	1270
(mm)	1.6 m/s					1460					14	90		1360	1360
	1.75 m/s	1490						15	10		1460	1460			
	2.0 m/s	1650						1700		1600	1620				
	2.5 m/s	1970 (TL ≤ 120 m) 2530 (TL = 120 – 130 m) 2850 (TL > 130 m)					2040 (TL ≤ 120 m) 2530 TL = 120 – 130 m) 2850 (TL > 130 m)		2040 (TL ≤ 120 m) 2530 TL = 120 – 130 m) 2850 (TL > 130 m)	2070 (TL ≤ 120 m) 2530 (TL = 120 – 130 m) 2850 (TL > 130 m)					
	3.0 m/s			NA							28	300 (TL≤	100 m),	3100 (TL > 100 m)	

<sup>1)</sup> Shaft dimensions are available from FLCAD

KONE S MINISPACE™ SMALL MACHINE ROOMW (rear counterweight)													
TYPE CODE PT10 PT13				PT15				PT18	PT21				
Load (kg	)	80	00		10	00			11	50		1350	1600
Car size (mm)		1350 >	x 1400	1600	x 1400	1600	x 1500	1800	c 1450	1700 x 1500		2000 x 1500	2100 x 1600
Door hei	ight (mm)							210	00, 2200, 2	2300, 2400	)		
Door wid	dth (mm)	80	00	90	00	91	00	10	00	10	000	1000, 1100	1000, 1100
Shaft	≤ 2.0 m/s	1	)	1	)	1	1)	2260	2050	2160	x 2100	2500 x 2150	2600 x 2250
size (mm)	2.5 m/s	1750 >	x 2000	2000	2000 x 2000 2000		x 2100	1)		1	1)	2500 x 2150	2600 x 2250
	3.0 m/s	N	IA	2120	20 x 2050 <sup>1)</sup>		2185	× 2470	1	1)	2580 x 2250	2680 x 2250	
Car heig	ht (mm)	2280	2400	2280	2400	2280	2400	2280	2400	2280	2400	2400	2400
Over-	1.0 m/s	4080	4200	3780	3900	3780	3900	3780	3900	3780	3900	3830	3830
head height	1.6 m/s	4170	4290	3840	3960	3840	3960	3840	3960	3840	3960	4010	4010
(mm)	1.75 m/s	4240	4360	3910	4030	3910	4030	3910	4030	3910	4030	4100	4100
	2.0 m/s	4330	4450	4000	4120	4000	4120	4000	4120	4000	4120	4170	4600
	2.5 m/s	4700	4820	4300	4420	4300	4420	4300	4420	4300	4420	4500	4900
	3.0 m/s	N	IA							515	0		
Pit	1.0 m/s			12	50				12	90		1270	1270
depth (mm)	1.6 m/s	1300							13	40		1380	1380
	1.75 m/s	1400						14	00		1490	1460	
	2.0 m/s	1550						15	50		1620	1620	
	2.5 m/s	2040 (TL ≤ 120 m) 2530 (TL = 120 − 130 m) 2850 (TL > 130 m)					2040 (TL ≤ 120 m) 2530 (TL = 120 – 130 m) 2850 (TL > 130 m)		m)	2070 (TL ≤ 120 m) 2530 (TL = 120 – 130 m) 2850 (TL > 130 m)	2070 (TL ≤ 120 m) 2530 (TL = 120 – 130 m) 2850 (TL > 130 m)		
	3.0 m/s		NA						2800	(TL ≤ 100	m), 3100	(TL > 100 m)	

<sup>1)</sup> Shaft dimensions are available from FLCAD



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<sup>™</sup> and KONE UltraRope<sup>®</sup>.

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

#### 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

#### 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

#### Philippines - KPI Elevators, Inc.

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

#### www.kone.ph

#### Singapore - KONE Pte Ltd

Singapore +65 642	4 6246
-------------------	--------

#### www.kone.sg

#### Thailand - KONE Public Company Limited

#### www.kone.co.th

#### Vietnam - KONE Vietnam LLC

Ho Chi Minh (main office)	+84 8 3997 3	5373
Hanoi	+84 4 3974 9	9445

#### www.kone.vn

#### DISTRIBUTORS IN SOUTH EAST ASIA

#### Brunei

Yusoki Sdn Bhd	+673 2790037
Cambodia	
Comin Khmere	+855 23 885 640
Laos	
Comin Asia	+856 30 777 4777
Myanmar	
Octagon Automobile & Machinery Services Co., Ltd	+95 9 8631438
Sarawak(Malaysia)	

**KONE Corporation** www.kone.com

Elebest Engineering Sdn Bhd

+60 82 365836