

## Schindler high-rise modernization Reinvigorate your elevators



## Modernization with Schindler Elevate your building to a new level

The legacy of Schindler is built upon delivering Swissquality engineering through dedication, expertise, and ambition. With over 140 years of history, Schindler has rich experience in the high-rise market and has consistently delighted customers.



#### Latest safety requirements

Passengers will be protected with the comprehensive safety measures adhering to the latest safety code.



#### Increased uptime\*

Modernized elevators will have a substantially enhanced reliability. Tenants and visitors will enjoy an upgraded ride experience.



#### Greater energy efficiency

Schindler provides highly energy-efficient machines. This reduces the environmental impact of the building they serve and helps to save energy costs.



#### Modern car design

A smartly designed car interior will blend beautifully into a modern building.

\*Uptime is the time the elevator is available versus the total operation time, assuming the elevator is running 12h/day



# High safety standards With the latest green-building technology

Schindler manufactures, installs, services, and modernizes elevators, escalators, and moving walks with the latest safety standards in the industry for all types of buildings. In parallel, a sophisticated sustainability concept is developed to continuously reduce the carbon footprint of our products and services.

## Code and safety compliance

After an in-depth safety assessment of your elevators, we will provide reliable consultations and recommendations about additional components and functions so that your equipment could be upgraded to comply with the latest safety codes.

## Unintended car movement protection

To prevent hazardous car movements when the door is open, Schindler applies reliable brakes and detecting components as part of a customized solution.

## Prevention against forced door opening

The mechanical car door lock prevents any unsafe attempts of self-rescue during entrapment, where passengers might try to force open the door from the inside.

#### Automatic evacuation device

In case of a blackout, the new control equipped with the automatic evacuation device will take the passengers to the closest landing floor for evacuation.

#### Graceful release

When suspicious but non-safety-related issues are detected, passengers will be released at the closest landing floor as "graceful release" is enabled.

#### Predictive maintenance

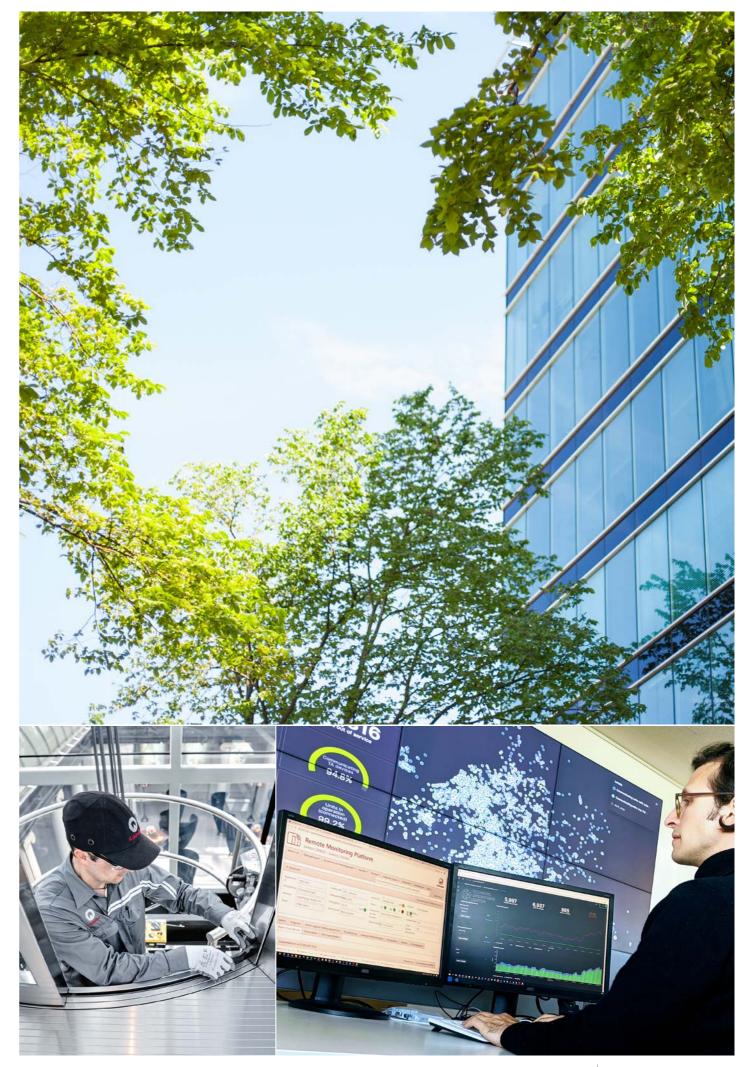
Schindler's intelligent Internet of Elevators and Escalators (IoEE) monitors elevators constantly and proactively files a report when service is required: a request will be initiated upon the detection of any suspicious occurrences.

#### Green-building technology

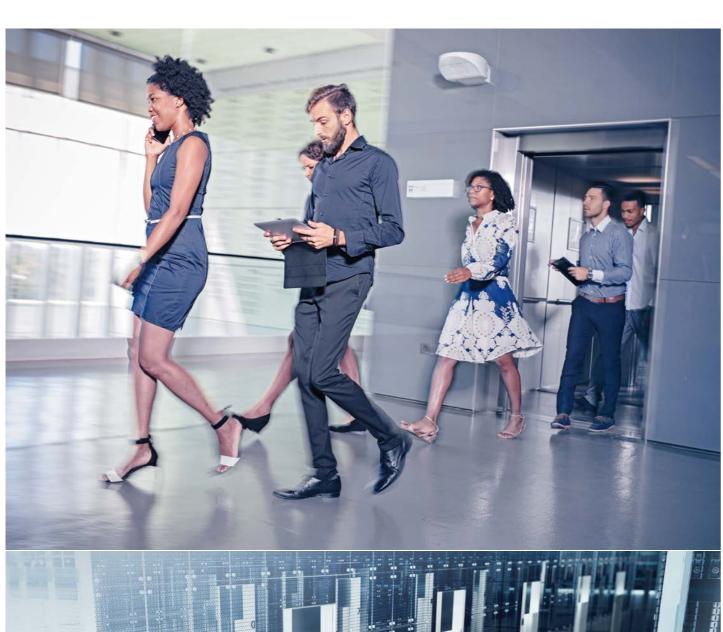
Schindler provides highly energy-efficient machines, which could return the regenerated energy to the building power grid through the best-in-class converters, lowering overall energy consumption. In addition to that, the unique ECO (Energy Control Option) Mode optimizes the energy consumption of the entire elevator system: With an upgrade of control and inverter only, the building could achieve an energy saving of 10% to 40%; with an upgrade of machine, control, and inverter, the building could benefit from an energy saving of 30% to 60%.\*

## Improved ecological standard

Schindler high-rise elevators can fulfill our customers' strict ecological requirements and play an important role in acquiring global green building certificates, such as LEED or BREEAM.



<sup>\*</sup>Actual energy-savings results depend upon the condition of the existing equipment, the model and package offered and the passenger stream pattern.





# New operation frontier with Schindler PORT Boosting traffic performance

Today, high-rise buildings demand their vertical transportation systems to be not only reliable and smart, but to provide the most innovative concepts and technologies, to brace the buildings for the future.



#### Compliant with elevator traffic planning ISO 8100:32

Schindler can play the role of an experienced traffic planning consultant. Our award-winning traffic simulation system applies the method specified in ISO 8100-32 for a comprehensive traffic analysis of the building and helps to work out the best solution accordingly.



#### A perfect stream of people and goods

The highly developed algorithms of Schindler's industry-leading Transit Management system, driven by Schindler PORT, can group passengers according to their destinations, hence, achieving an optimal traffic stream within the building.



#### Security access control

The credentials of users can be verified through matching their preprogrammed cards or smartphones with passengers' access rights defined by the building management. In this way, security access control can be managed remotely and intelligently.



#### Impeccable personalization service

The Schindler PORT system can offer unique ride experiences tailored for individual passengers and specific requirements, including for passengers with disabilities or for exclusive VIP rides.



#### Smart mobility

Building managers can access real-time elevator status with their smartphones, as Schindler PORT synchronizes data through Internet of Things (IoT). It also creates a transparent ecosystem through which all key stakeholders could view real-time information about their Schindler equipment anytime, anywhere.



#### Passenger report

The passenger report provides accurate data of tenants and visitors in and out movement throughout the building. The report serves as a security record for the building management to track, analyze, and respond swiftly when required.

Global Large Projects Schindler high-rise modernization Global Large Projects

## A modern design to uplift your building Elevate your creativity

Elevators are striking architectural elements. They determine the impression the interior of a building makes – at first glance, right when you enter the lobby. With a wide spectrum of materials, colors, and design elements, Schindler high-rise elevators blend harmoniously into the overall building concept.

#### A new look

With a state-of-the-art design, your elevators will impress your tenants with a brand-new ride experience.

#### Minimum disruption

We guarantee a hassle-free installation of modernized elevator cars and systems with minimal disruption to the building's operation.

#### Touchless solution

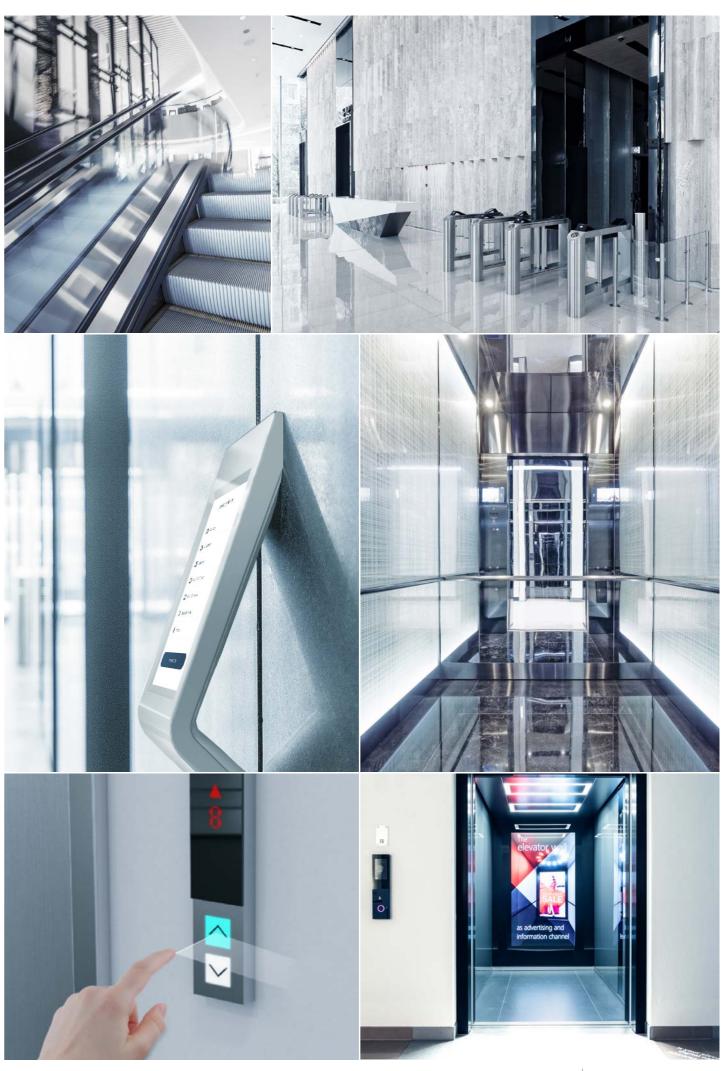
Schindler's touchless solutions enable contactless interaction between passengers and the elevators. The passengers could use Schindler's app to call the elevator and choose the destinations from their smartphones.

#### Schindler PORT terminal

Stylish touch screen design: Inspired by the latest design and architectural trends, the PORT terminals feature sleek glass touch screens. The monitors are available in different forms: on the wall, mounted on a pedestal, or integrated to the turnstile.

#### Digital media services

Schindler's digital media services, such as Schindler DoorShow, SmartMirror, and AdScreen turn elevators into engaging entertainment and service platforms, presenting to passengers the attractions of the building and share the latest information.





## Meticulous Schindler engineering Modernize smartly with dismountable machines

When the elevator system of an existing building is to be modernized, a common dilemma is there is no way to lift the elevator machine to the top of the building: whether through the existing pathways or using a crane, considerable damage to the building would be inevitable due the size and weight of the machine.

But with Schindler's innovative modernization solutions, new machines and equipment could be installed into the machine room without changing the existing building layout. Large machines can be meticulously disassembled to smaller parts, passing through existing pathways and reach, delivered by the existing elevators, the machine room with ease.

With a customer-oriented approach, Schindler always strives for innovative solutions. Keenly aware of customers' interest, we always make sure that any disruption to the building operation is minimized.



Global Large Projects Schindler high-rise modernization

### Customized at your request Phased modernization

Schindler offers phased modernization with a high degree of flexibility and adaptability regarding the builder's readiness and the modernization budget.

A full modernization package sometimes may overshoot the annual budget and the service downtime during installation might not be acceptable in an operating environment. Upgrading elevators while retaining an existing machine in good condition, is definitely a good alternative. With the state-of-the-art control system on existing machines, elevators will be compliant with the latest safety and energyefficiency standards.

Building owners can avoid long downtime and enjoy the substantial benefit brought by the improvement on traffic performance and ride quality.

Phased modernization is usually split into two stages: Stage 1, upgrading the control system: this could boost traffic handling capacity and ride quality immediately.

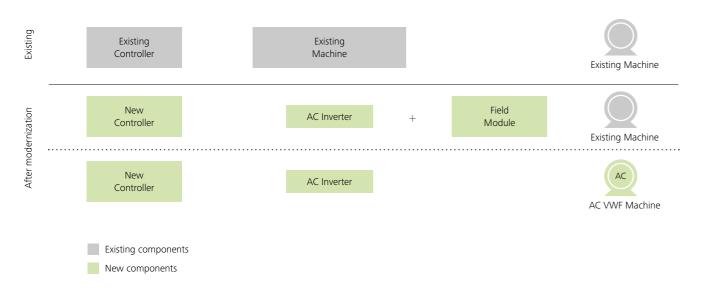
Stage 2: replacing the existing machines and other components with new ones. After these two steps of upgrade, the elevator system will be as good as new.

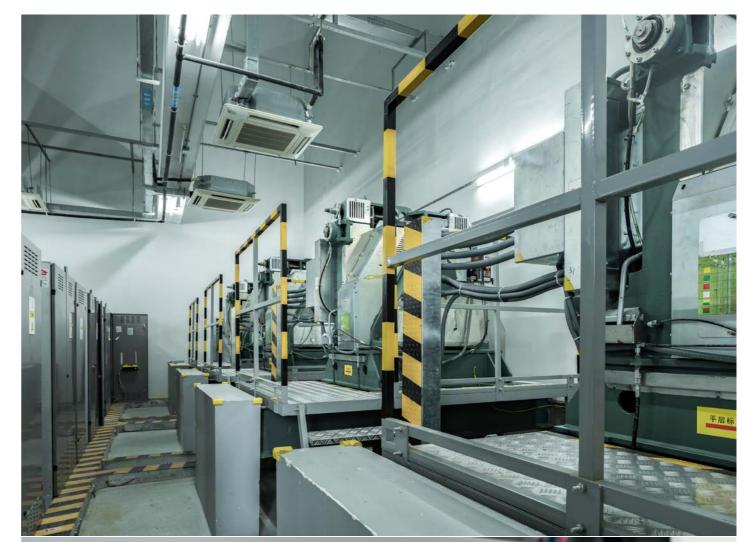
Schindler products comply with the latest EN81-20/50 code and entail down-ward compatible features. This means modernization can be carried out seamlessly. Thanks to the latest energy-saving technology and energy-regenerative features, elevator energy consumption is substantially reduced.

The main benefits of Schindler phased modernization:

- High degree of flexibility and adaptability to suit the building's operation
- Boosted elevator uptime
- High cost-performance ratio for optimized building financial planning

#### A phased modernization approach







Schindler high-rise modernization

### Schindler PORT

## For a seamless and hassle-free modernization

Buildings of any age can be updated to modern standards with a Schindler PORT destination interface installation which can effortlessly convert almost any conventional controls with Schindler PORT destination technology. This provides immediate performance boosts and personalization benefits.

#### High elevator performance

The intelligent destination technology of Schindler PORT could improve elevator performance once it has been installed: at the beginning of a modernization, even with one car out of service, the overall performance of the elevator system would not be substantially compromised.

A Schindler PORT upgrade can be implemented as the first step of a more comprehensive modernization, enabling existing buildings to compete with newly constructed buildings.

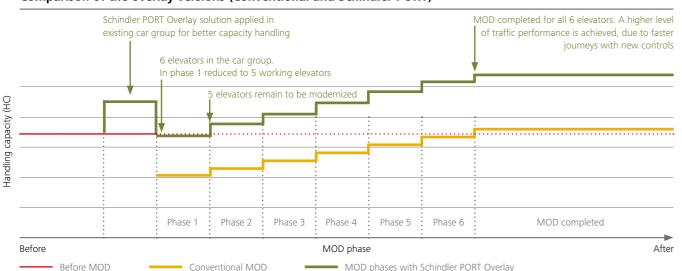
#### Schindler PORT Overlay

The Schindler PORT Overlay solution would bridge the old control system and the new Schindler PORT system, bringing them under one control during the modernization process. The overlay between the modernized and the old elevators optimizes traffic performance, even when one elevator is out of service. During the upgrading process the old and the new elevator controllers will temporarily co-exist.

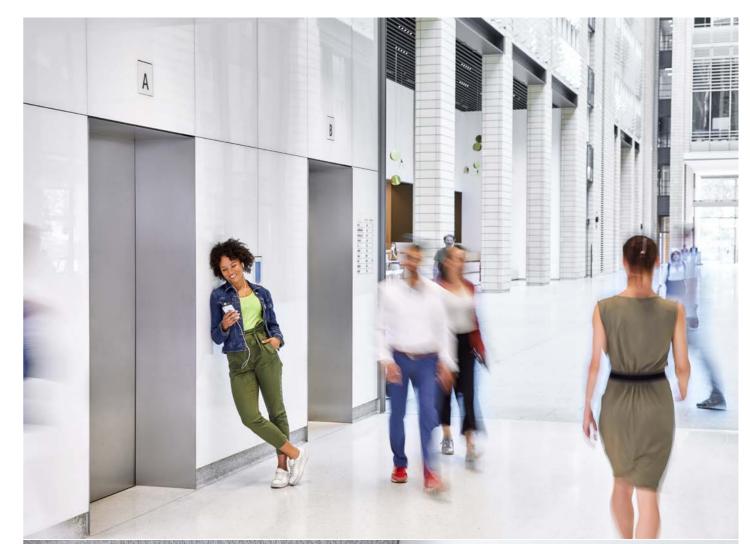
#### Normal operation

An elevator system under modernization could immediately reap most of the benefits of Schindler PORT; on the level of individual elevators, with Schindler PORT, they can be upgraded without causing any inconvenience to the passengers and can be seamlessly reintegrated upon completion.

#### Comparison of the overlay versions (Conventional and Schindler PORT)



This illustration is for reference only. For more specific estimations, please consult our sales representatives





Global Large Projects

## Iconic achievements Modernization references



### Marriott Marquis

New York, USA

#### Hotel / height 175 m

After the hotel has been modernized with Schindler PORT, the guests can enter their destination into the keypads in the lobby. The passengers will reach the desired floor smoothly and fast with a minimum of stops along the way. Schindler PORT system has reduced delays significantly and reduced energy consumption up to 3.3%.

New Schindler products:

- Schindler PORT
- Controller including fixtures and indicators
- AC gearless machine



#### 500 Lake Shore Drive Luxury Apartments Chicago, USA

#### Residential building / height 114 m

The building is a prestigious 45-story high-rise residence with a stunning glass facade and an understated architectural design.

In 2012, its destination control was optimized with the installation of Schindler PORT.

New Schindler products:

- Schindler PORT
- Controller including fixtures and indicators
- AC gearless machine



#### Scotia Plaza Toronto, Canada

#### Office building / height 275 m

Scotia Plaza is one of the largest elevator modernization projects in North America, including the upgrading of 31 elevating devices, the integration of Schindler PORT, and 22 double-deck elevators with machine replacement. This project has set a new standard in the whole complex.

New Schindler products:

- Schindler PORT
- Controller including fixtures and indicators
- AC gearless machine
- Door drive
- Double-deck elevators



Alexandra House

Hong Kong, China

#### Office building / height 124 m

Built in 1976, Alexandra House has 37 floors of Grade-A and columnfree office space in the business hub of Hong Kong's Central District with 15 elevators.

New Schindler products:

- Schindler PORT
- Controller including fixtures and indicators
- AC gearless machine
- Door drive



In 2008, the third-party control system was upgraded from conventional destination control to Schindler PORT as a partial modernization. In 2018, the old direct current (DC) machine was replaced.

New Schindler products:

- Schindler PORT
- Controller including fixtures and indicators
- AC gearless machine
- Door drive





Shanghai, China

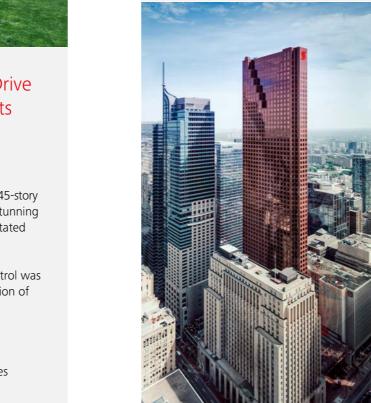
#### Office building / height 193 m

Home to several diplomatic missions and Fortune 500 companies, CITIC Pacific Plaza has been an icon of West Nanjing Road since the early 2000s.

New Schindler products:

- Schindler PORT
- Controller including fixtures and indicators
- Alternating current (AC) gearless machine





Global Large Projects Schindler high-rise modernization

## Iconic achievements Modernization references



### Lumpini Tower

Bangkok, Thailand

Office building / height 147 m Lumpini Tower is a 37-story office building located at the business center of Bangkok.

Its transformation includes the replacement of existing thirdparty equipment.

New Schindler products:

- Controller including fixtures and indicators
- Card reader system
- AC gearless machine



#### Office building / height 114 m

House and Mandarin Oriental.

- Schindler PORT
- Controller including fixtures and indicators
- AC gearless machine

### **Exchange Square**

Hong Kong, China

#### Office building / height 188 m

Surrounded by a large public plaza, the three towers are located in the financial heart of the city. A total of 67 elevators drive the people stream within these towers. The modernization includes conventional control system upgraded to Schindler PORT, Miconic V controllers to TX-GC2, Thyristor inverters to Power Factor 1 inverters, and DC machines to the latest AC VF machines.

New Schindler products:

- Schindler PORT
- Controller including fixtures and indicators
- AC gearless machine
- Door drive



Prince's Building is an office tower with a six-level shopping center. Located along the western side of the southern section of Statue Square in Central, Hong Kong, the building is connected to Alexandra

New Schindler products:

- Card reader system

#### 80 Collins Street

Melbourne. Australia

#### Office building / height 182 m

Collins Street in Melbourne has been known as the "best address" for commercial developments for over a century. The 52-story North Tower of 80 Collins was built in 1977 and upgraded in 2020 with Schindler modernization solutions and Schindler PORT.

New Schindler products:

- Schindler PORT
- Controller including fixtures and indicators
- Card reader system
- AC gearless machine



#### Tour Ariane

Paris. France

#### Office building / height 152 m

Tour Ariane is an office skyscraper located in La Défense, a high-rise business district situated west of Paris, France. The tower has 36 floors with a facade of original cladding. 18 units of third-party elevators were fully replaced with Schindler modernization solutions and Schindler PORT.

New Schindler products:

- Schindler PORT
- Controller including fixtures and indicators
- Card reader system
- AC gearless machine



#### Island Shangri-La Hong Kong, China

#### Hotel / height 213 m

Built in 1991, Island Shangri-La is a five-star luxury hotel located in the business center of Hong Kong. 15 elevators were modernized, among which two were converted to double-deck elevators; a corner post elevator has been modernized as well.

New Schindler products:

- Controller including fixtures and indicators
- AC gearless machine
- Door drive
- Double-deck elevators
- Corner post car



Global Large Projects Schindler high-rise modernization Schindler high-rise modernization Global Large Projects



## We Elevate... Modernization

#### For more information, please contact us:

Schindler Elevator Ltd. | Global Large Projects Zugerstrasse 13 | 6030 Ebikon | Switzerland Phone + 41 41 445 31 31

Schindler (China) Elevator Co., Ltd. | Global Large Projects No. 555 Xingshun Road | Jiading District | 201815 Shanghai | China Phone + 86 21 6709 6666

email@schindler.com www.schindler.com

This publication is for general informational purposes only and we reserve the right at any time to alter the services, product design and specifications. No statement contained in this publication shall be construed as a warranty or condition, expressed or implied, as to any service or product, its specifications, its fitness for any particular purpose, merchantability, quality or shall be interpreted as a term or condition of any service or purchase agreement for the products or services contained in this publication. Minor differences between printed and actual colors may exist.

