

TWIN



2

cabs

1 shaft

0 crowds

Space is more valuable in high-rises than in any other type of building. TWIN makes sure it is put to better use.

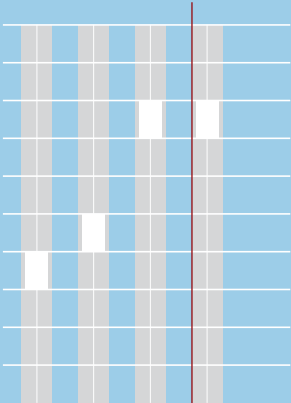




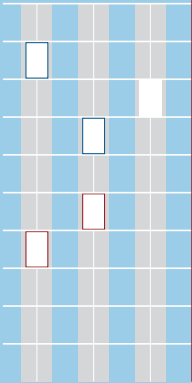
Room for new ideas

The idea of having an elevator with two independent cabs operating in the same shaft dates back to the 1930s, but it took modern-day technology to turn it into reality for the elevator system of the future. Coordinated by an intelligent control system and monitored by the latest safety technology, the TWIN system from ThyssenKrupp Elevator provides significant advantages for buildings and occupants. TWIN: 2 cabs, 1 shaft, 0 crowds.

**Conventional
elevator group**



**Elevator group
with TWIN**



Space saved by
eliminating a shaft



More space


The TWIN principle greatly enhances elevator efficiency. The example at the top of page 2 demonstrates this in comparison with a conventional four-shaft elevator group. The TWIN system achieves the same performance with one shaft less. For new buildings this means a major gain in usable floor space or a corresponding reduction in building volume. Either way, the benefits are clear.



The arrangement of the counterweights in the shaft shows: each TWIN cab travels independently of the other.



Higher performance



In modernization projects, a TWIN system can substantially increase the performance capacity of an existing elevator installation. In a traditional four-shaft group, 40% more passengers can be transported with a TWIN. Alternatively, one of the shafts can be put to a different use, housing equipment such as air conditioning and cables. Either way, the utility of the building increases significantly.

Passengers select their destination on a touch-screen terminal; the system indicates which elevator will take them there fastest.






Destination selection

The brain of the TWIN is the intelligent ThyssenKrupp Destination Selection Control system (DSC), which allocates calls optimally to individual elevators. Passengers select their destination not in the cab but on a touch-screen terminal in the hall. The control system checks the call against the current position and travel direction of the elevators and against other calls. Within fractions of a second it calculates the ideal travel route and indicates the elevator that will get the passenger to his/her destination fastest. Crowds caused by random overloading of individual elevators is ruled out. The DSC system can also prioritize certain journeys, such as transporting disabled persons or allowing encoded access to specific floors.

The minimum safety distances are monitored continuously using state-of-the-art technology.



Total safety



The two TWIN cabs are prevented from getting too close by a quadruple redundant safety system: intelligent allocation of calls; automatic monitoring of minimum safety distances; emergency stop function if the safety distance is breached; and automatic engagement of the safety device in the extremely unlikely event that the first three stages fail. The TWIN system has been fully certified for safety by the German TÜV inspectorate.




TWIN cab with integrated screen showing
news and information.





In the picture

All the design and functional elements that have proven successful in conventional elevators can naturally also be used in the TWIN. Flat screens showing the latest news and information, for example, or sophisticated software packages for elevator control. Monitoring solutions provide service personnel with information to assess traffic volumes and control elevator functions.

A photograph of an industrial machine, likely a welding or assembly station. It features a prominent orange robotic arm with a blue logo on its side, mounted on a green frame. The frame has a large silver panel with the number '7u' on it. The machine is situated in a factory or workshop environment with other equipment visible in the background.

Like all TWIN components, the drive system is based on classic, proven elevator technology.



Cost-efficient concept


The TWIN concept not only offers exceptional performance, it is also extremely cost-efficient: the individual TWIN elevators are traction elevators assembled from standard components. Each equipped with their own drive sheave and counterweights, they travel independently of one another on the same guide rails. Installing two cabs in one shaft involves limited additional efforts, but in return the TWIN system offers a completely new transportation concept for buildings upward of 50 meters in height.

Elevator shaft of the first
TWIN at Stuttgart University.





Finding partners



The TWIN made its world debut in 2002 in a pilot project carried out with the University of Stuttgart (Germany). The number of students there had risen steadily over the years, straining the capacity of the university's conventional elevator installation. One of its six shafts was converted to the TWIN system, and the benefits were immediate. 2 cabs, 1 shaft, 0 crowds. The project won 1st prize for a modernization project in the Elevator World Project of the Year Awards 2004.

**Successful installation: the
TWIN system transports people
in ThyssenKrupp's headquarters
building even more efficiently.**





Setting an example

In 2004 a TWIN system was installed in the Dreischeibenhaus, the headquarters of ThyssenKrupp and ThyssenKrupp Elevator in Düsseldorf (Germany). There, the number of shafts was reduced from eight to six, increasing usable space. The previous mainly mechanical safety system was replaced by an electronic system, allowing the upper TWIN elevators in Düsseldorf to travel twice as fast as the TWIN in Stuttgart.

The man who ordered the first TWIN: Klaus Schmiedek, head of Stuttgart and Hohenheim (Germany) university building office.





Customer satisfaction


In the meantime the first commercial orders for the revolutionary elevator system have been placed. One TWIN is being installed in the Oceanic Center in Valencia (Spain) and a total of four at the headquarters of the BMW Group in Munich (Germany). The Main Triangle Building in Frankfurt (Germany) is being fitted with two glass Panorama TWIN elevators. Over 100 inquiries for TWIN projects all over the world show the high level of interest in this product.




Dipl.-Ing. Gerhard Thumm heads up the new Stuttgart research center, where work is focused on the TWIN.



Setting the pace



The TWIN is currently approved for speeds of 8 m/s, but this barrier too will shortly be overcome. In 2004 a research and development center was opened in Stuttgart (Germany) which is working closely with other research centers in North America and France. The main goals are to further improve the TWIN concept in terms of increasing space efficiency in buildings and replace mechanical components with electronic or software-based solutions.




Identify, select, monitor and reach
destinations: that's progress.





No limits



2 cabs, 1 shaft, 0 crowds: behind this simple formula lies the key elevator technology for the 21st century. The TWIN system is seen as the most important strategic innovation in the elevator market. In the future, TWIN will set the standard for space and traffic efficiency, safety, ease of operation and passenger convenience. True to our motto: Accept no limits.

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