Baumschlager Eberle Architects

Commitment to sustainable design

Baumschlager Eberle Architects (BE) is an Austrian based company present in the Asia Pacific region since 2003 and has currently branches in Hong Kong, Beijing, Shanghai and Hanoi. The headquarter in Lochau, as well as 5 further offices across Europe are devoted to offer the best possible solution to the local conditions and to promote the high quality and long-lasting value of Austrian architecture abroad.

BE's over 25 years of experience in the field of sustainable architecture has made it possible to combine the high efficiency with opportunistic design, so that intelligent landmarks emerge. The multiple awards the practice has been granted, as well as the recent nomination for the 2011 Pritzker Architecture Prize substantiate BE's achievements.

From the beginning on, Baumschlager Eberle's philosophy revolves around regarding architecture as a holistic task, the complexity of which could only be considered as mastered if the emerging buildings fulfill all the demands of structural intelligence, ecological sustainability, economic efficiency and social approval.

Obeying the belief that architectural concepts should essentially contribute to the sustainability of buildings, over 300 completed buildings are evidence of the fact that economics and ecology in architecture do not generate contradictions – neither in small residential blocks nor in large complexes.

Baumschlager Eberle's work represents the active commitment to individual solutions, client satisfaction and resource-saving planning.

In this issue of Building Journal, we featured three selected China projects by BE.

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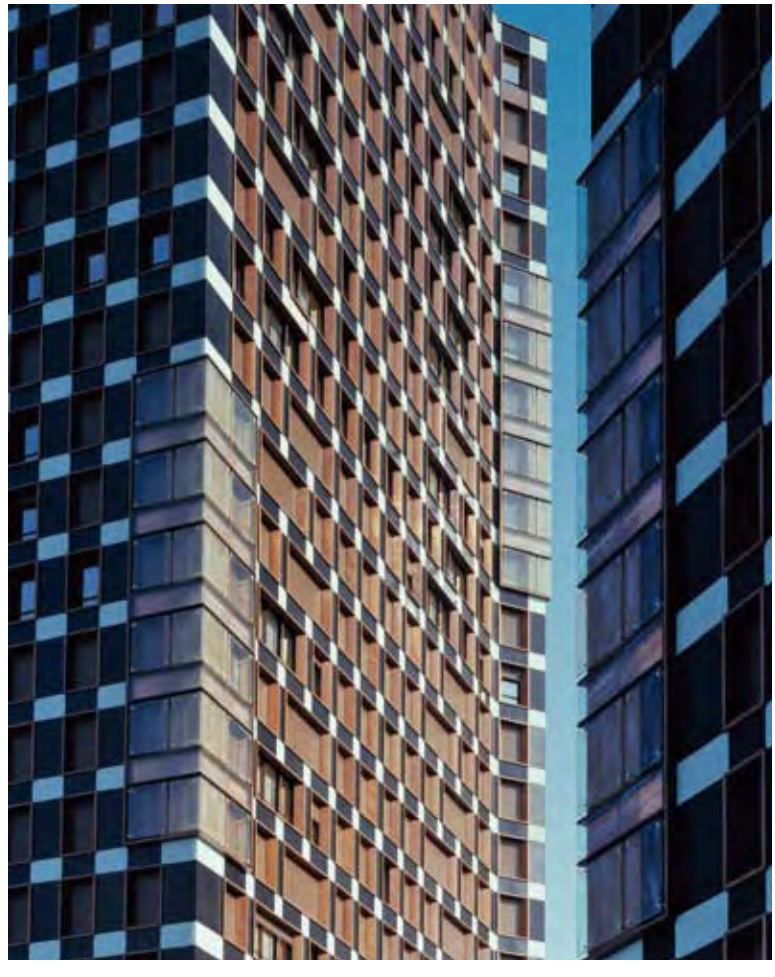
Moma, Beijing, China

Energy optimized building

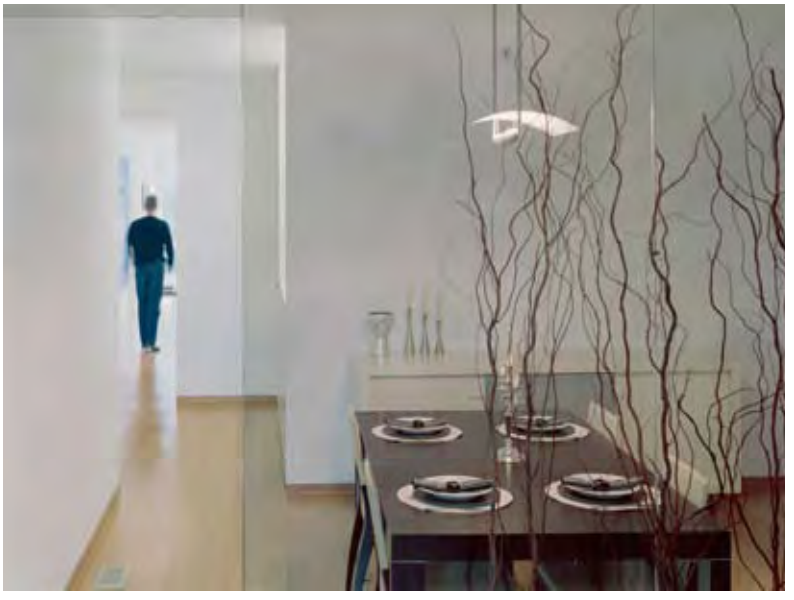


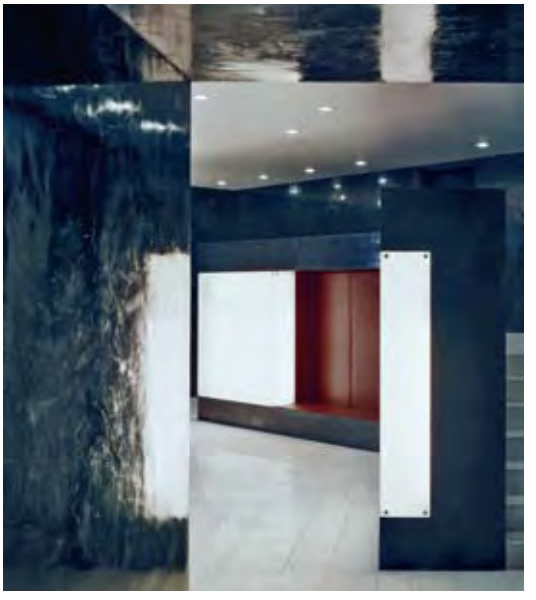
The two tower blocks, which were built using state-of-the-art technologies, are located in an area to the east of the city's second ring road, halfway between the city centre and the airport. The height, layout and volume of the towers were laid down in an existing master plan and could not be altered. The awarding of the contract to Baumschlager-Eberle was largely due to the firm's experience in the field of energy optimized building.

As heating and cooling are provided by an active ceiling and controlled ventilation system, the buildings receive a continuous supply of fresh air while room temperatures and humidity are kept constant. The bevelling of the inner faces of the window openings varies in accordance with the direction in which the facades are facing, which enhances the natural lighting of the apartments while also helping to save energy.

On the assumption that durability is not just a technical matter but also one of cultural acceptance, local influences were incorporated in the design of the facades. Thus the chequered pattern of the glass panels under laid with black and white is actually an allusion to the Chinese principle of Yin and Yang. A dash of colour is added by the red copper frames of the windows. The choice of materials was also pragmatically motivated: both glass and copper are relatively inexpensive in China.

The buildings contain a total of 208





spacious, four- to five-and-a-half-room apartments. For the interior design the utmost importance was attached to materials and finish. An intelligently devised layout plan ensures great flexibility of function and permits a wide range of furnishings.

client
Beijing Modern Hong Yun Real Estate Development Co Ltd

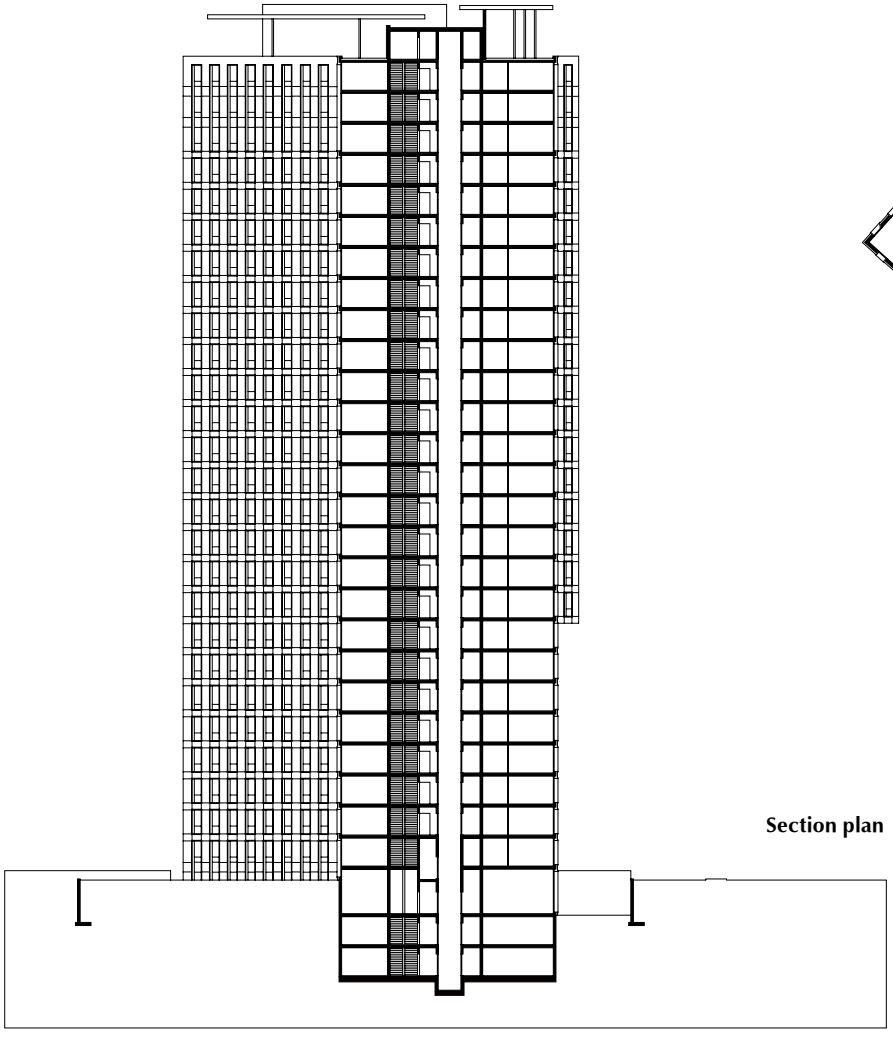
site area
10.240 sq m

total floor area
64.000 sq m

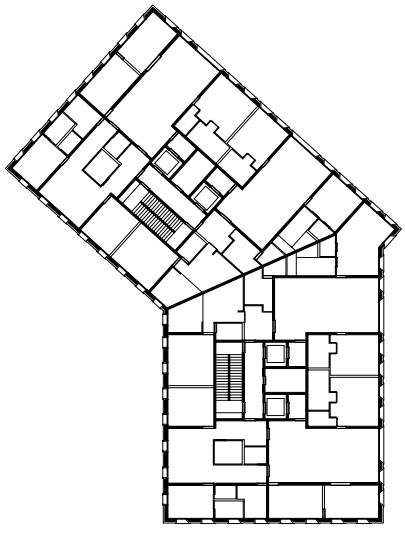
area of building
2.154 sq m

building volume
190.000 cu m

completion
2005



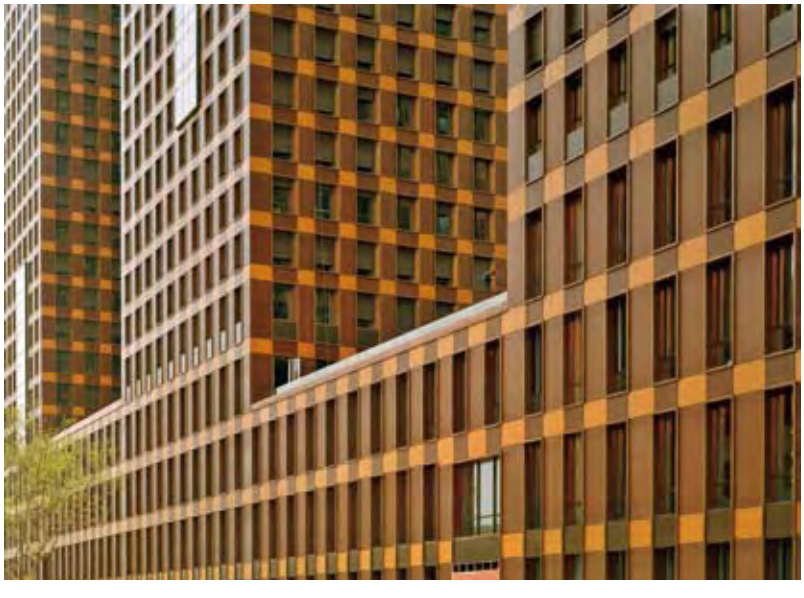
Section plan



Typical floor plan

PopMoma, Beijing, China

Homes for the discerning



The master plan specified three high-rise blocks of great urban density to be built at a new traffic intersection on the perimeter of Beijing's inner city. This southward-facing complex occupies the northern rim of an area that comprises a whole series of new buildings. It forms a clean line parallel to the future main traffic artery. Above the first four floors devoted to shops, offices and service facilities, the towers spiral imposingly up into the sky for a further 31 or 24 storeys, with six apartments per floor.

Any claim to a future-oriented construction concept postulates the durability of the building, which in turn makes the optimum use of energy the overriding consideration. The use of active ceilings for heating and

cooling purposes as well as for the controlled ventilation of the buildings are based on state-of-the-art technologies.

In combination with a specially designed façade designed to enhance exposure to daylight a total of 388 apartments and 7,855 sq m of office space are to be provided, all of which is to be extremely energy-efficient and offer a high standard of comfort. With its plain and unassuming modular structure the façade sets itself off agreeably from the more or less successful patchwork structures that surround it.

The inner faces of the window openings, which are bevelled differently in accordance with the direction they are facing, are made of warm copper. Together with the glass-panel facing, through which a similar, somewhat darker hue shimmers, this lends the building a superior appearance of quiet elegance. It provides an attractive backdrop for the green enclave which it and the other new buildings have managed to preserve against the encroaching urban environment.

site area
10.240 sq m

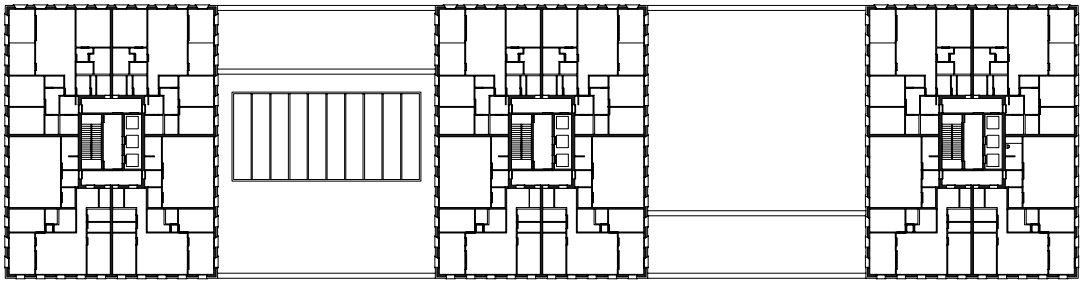
area of building
4062 sq m

gross floor space
97.300 sq m

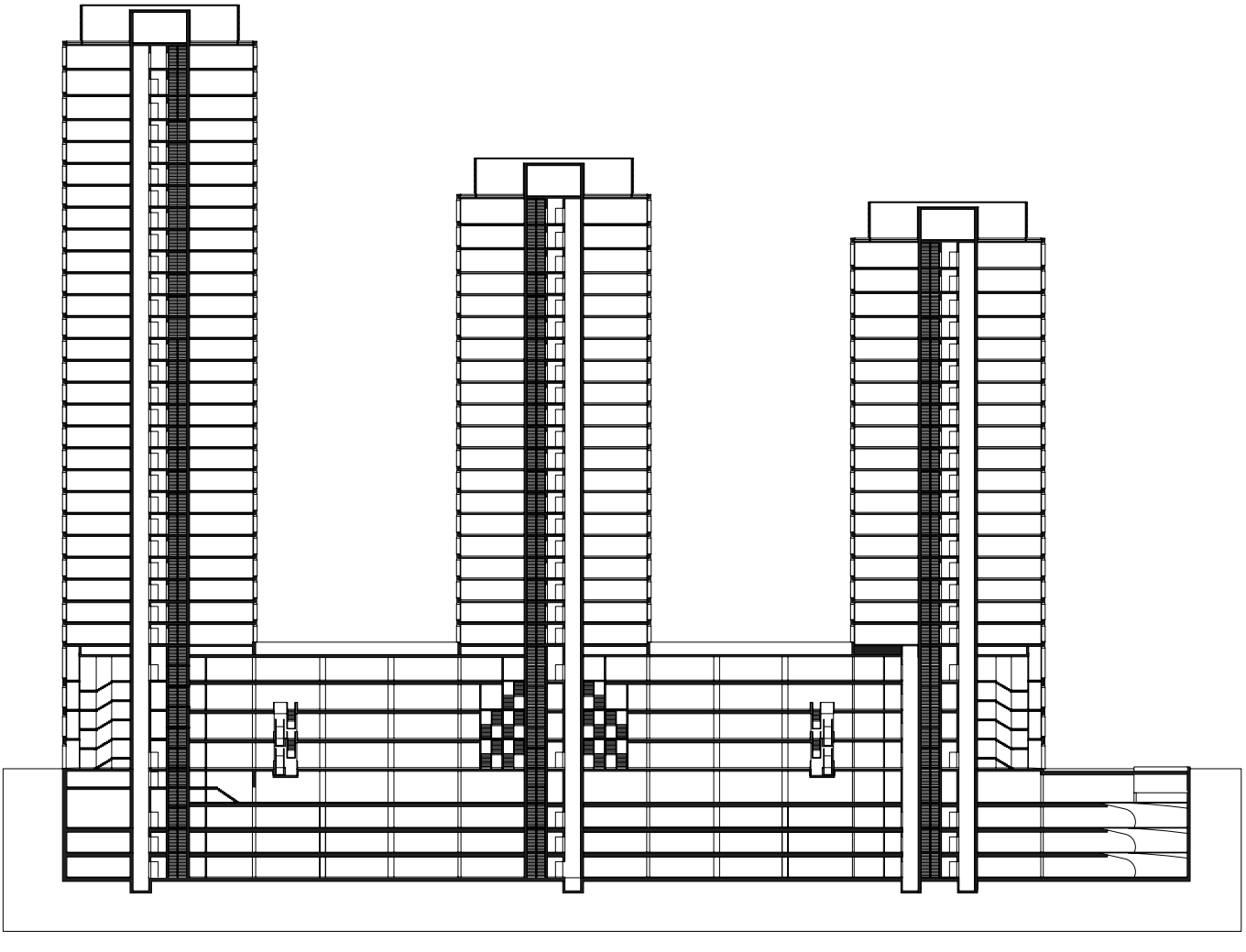
gross floor space aboveground
78.000 sq m

building volume
260.000 cu m

completion
2007



Ground floor plan



Section plan

Darron Century Complex, Qingdao, China

Cult of the axis

It is a prominent corner plot in the new district of Qingdao that Baumschlager-Eberle builds on. High-rise buildings with a particularly sophisticated open space design are planned for the entire plot.

In high-rise construction, there is, after all, much talk of the problem of the human dimension. The architects have linked the two towers by means of a four-story lobby which serves as an independent link between the towers, its scale grading the height development of the built structures on the site. The twist of the two building structures has repercussions on their presence in the new urban district. The residential high-rise is aligned along the axis of a central. In the process, the 'cult of the axis' always puts the adjacent tower with its obliquely slanted side view in relation, so that the synchronicity of the stereotomy is reflected.

The load-bearing facades, in turn, formulate the abstractive nature of the building envelopes as large-scale screens for the green spaces. This is achieved by a structure of two independent layers, which form a climatic boundary, and also shade from sunlight and screen from view by means of three panels. The outer, three-part glass layer consists of two movable elements and one fixed element. The residents and users of the offices therefore have a right to their individual window openings.

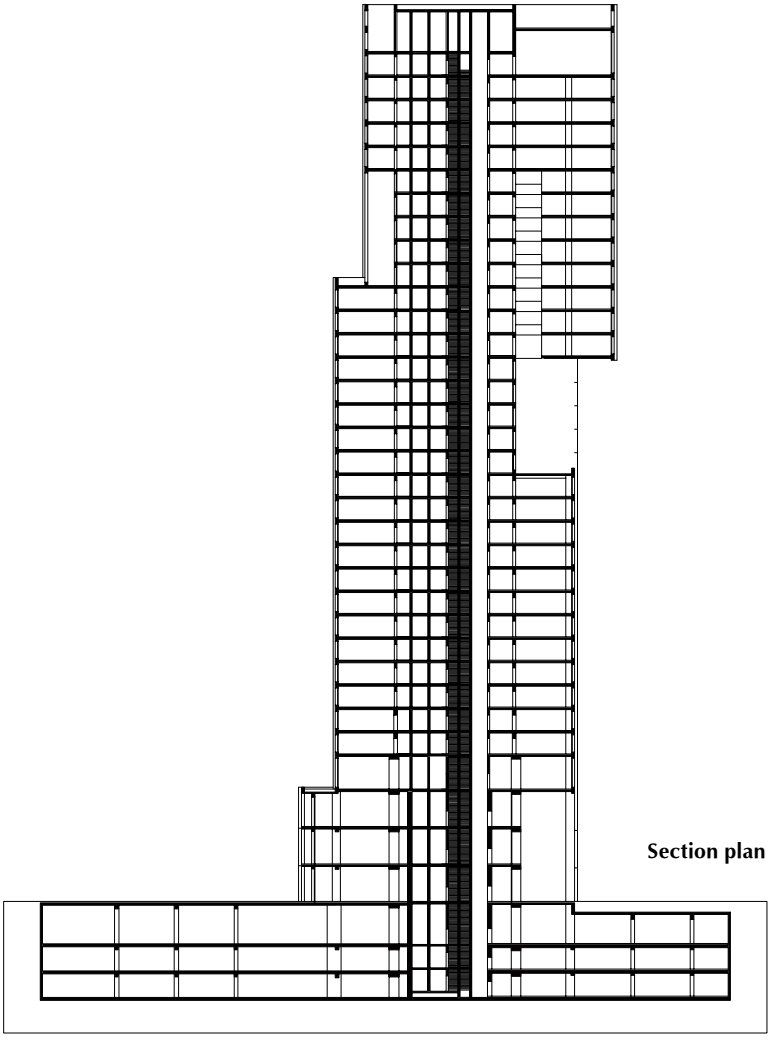
The efficiency of the glass panels is enhanced by a traditional, rediscovered method of surface treatment. It creates frost-like patterns which provide better sun shading and a lower degree of reflection.

The opaque appearance of these facades in front of 300 apartments and 19,600 sq m in office space accommodates not only the park landscape with the variability of its movable windows. The glass covered sky gardens in both towers, spanning five floors reflect the design of the lobby, so that vegetable delicacy is echoed both on the ground floor and the upper floors. The spatial wealth of both towers corresponds to the optimization of floor plans. From apartments for singles all the way to four-room apartments, each configuration can be implemented rationally as a matter of course, just as the offices lend themselves to contemporary forms of organization.

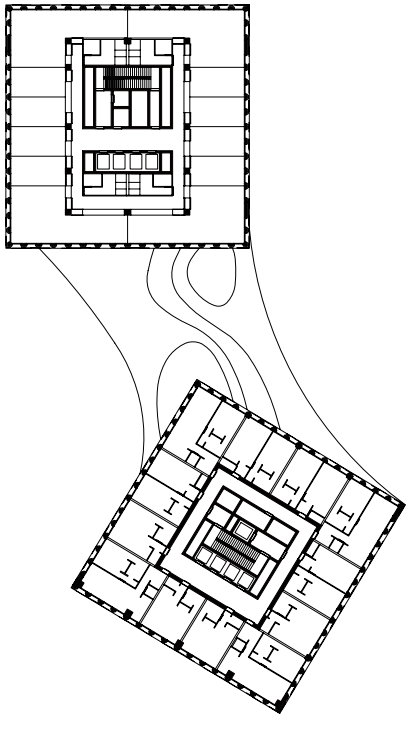
client
Qingdao Darron Real Estate Co Ltd

gross floor area
59.400 sq m

completion
2009



Section plan



Typical floor plan