

AGBAR TOWER

Barcelona, Spain

Development Team

Developer

Layetana Developments
Barcelona, Spain
www.layetana.com

Owner

Agbar Group
Barcelona, Spain
www.agbar.es

Architect

Atelier Jean Nouvel
Paris, France
www.jeanouvel.fr

Associate Architect

b720 Arquitectos
Barcelona, Spain
www.b720.com

Structural Engineer

Brufau, Obiol, Moya & Associates, S.L.
Barcelona, Spain
www.bomasl.com

The new 35-story headquarters of the Agbar Group, a Spanish multinational holding company, stands out like a lighthouse against the Barcelona skyline. Agbar Tower (Torre Agbar) is the cornerstone for new development in the new “22@ district,” an emerging neighborhood that is transforming 198 hectares (489 ac) of Barcelona’s 19th-century industrial Poblenou district into a 21st-century mixed-use district for the global knowledge-based industry. Its location alone, at the 22@ district’s apex closest to Plaça de les Glòries Catalanes—the remarkable double-decker roundabout at the intersection of three of Barcelona’s major boulevards (Gran Via, Diagonal, and Meridiana avenues)—accords Agbar Tower a landmark status. The multicolored, bullet-shaped tower contains 50,903 square meters (547,915 sf) of space, including 33,210 square meters (357,469 sf) of office space in 32 above-ground stories and 17,693 square meters (190,446 sf) of parking, an auditorium, a service area, and a loading bay on three subterranean levels. The total investment cost was €120 million.

The tower’s shape is multireferential, leaving it open to many different interpretations. Its designer, French architect Jean Nouvel, calls it “a fluid mass that has perforated the ground,” a permanent geyser reflecting the primary business activity of its owner, which provides water to the city of Barcelona and other municipalities in Spain and elsewhere. The structure’s shape also mirrors that of Montserrat, a mountain that is a powerful symbol for the Catalan people. Finally, the tower pays homage to one of Catalonia’s best-known architects, Antonio Gaudí. It is not, says Nouvel, a skyscraper; rather, “it is a unique growth” in the city: organic, like the architecture of Gaudí. And like Gaudí’s architecture, Agbar Tower—despite its abstracted appearance and organic inspiration—also honors Western architectural traditions. Like a classical column, it rises perpendicularly from its plinth until, halfway up, it starts a gradual inward curve, following the entasis of a classical column. In that respect, it dispels comparison with Norman Foster’s contemporaneous Swiss Re Tower in London, which is some six stories taller (Agbar Tower is currently Barcelona’s third tallest building).

Agbar Tower consists of two nonconcentric ovoid cylinders, a larger one built around a smaller one, crowned with a steel and glass dome. The entire facade is made up of 92.5-square-centimeter (14.3 in²) modules; each story’s perimeter is 120 modules around and four modules high. The three-layer facade features, from inside out, a first layer of concrete; a second of corrugated aluminum sheets of different colors—ranging from warmer tones at the bottom, representing the earth, to cooler tones above, representing the sky—and a third layer of more than 59,600 reflective, tinted glass louvers that blur the tones of the skin below, modifying its colors according to the time of day and the weather. (More than 4,500 separate lights on the building’s exterior illuminate it at night, providing even more different colors and



Project Data

Web Page

www.layetana.com/english/procorp_torreagbar.htm

Site Area

4,567 square meters (1.13 ac)
76 percent open space

Facilities

33,210 square meters (sf) gross
building area
330 subterranean parking spaces

Land Uses

office, parking

Start/Completion Dates

January 2001–June 2005

Jury Statement

Located at the intersection of three of Barcelona's most important streets, Agbar Tower stands out as a "light-house" for the city's burgeoning 22@ district. Containing 35 stories of office space and named for the company that occupies it, the tower incorporates a number of low-tech passive cooling techniques that belie its striking high-tech appearance.



patterns.) The building's open-plan interior, with no internal pillars, allows for an extremely efficient use of space, and its interior spaces are as colorful as its facade.

Layetana Developments' goal, from the start of the design process, was to keep the tower deliberately low-tech and energy-efficient. A walkway on the exterior of each story enables relatively unskilled workers to clean the structure from the outside every three months, and the triple epidermis improves its energy efficiency. While the building's 4,400 windows appear to be randomly distributed, they are more abundant on the northern face than the southern one, ensuring adequate ventilation and allowing the building's users to make optimal use of natural lighting.

The construction process, which began in January 2001, faced numerous challenges. Because the existing water table began just eight meters (26 ft) below street level, 30 wells had to be dug, and it took almost a year of round-the-clock pumping to drain the site sufficiently to construct the 45-meter-deep (158 ft) foundation. The 144.4-meter-high (473.7 ft) tower was built in three phases, using a self-climbing framework system. First came the inner ring, then the outer ring, and finally the elevator shafts. Mounting the dome also was a complex process. The general public, as well as local and international media, closely followed the building's progress; even before its completion, the tower was the most talked-about new building in the city.

Since the Agbar Group's 1,200 employees moved into the tower in June 2005, more than 50 other large, multinational firms have set up business in the surrounding district. (Numerous skyscrapers are being planned in the vicinity to meet demand in a city that is squeezed between the mountains and the sea.) "It has been one of the main driving forces in the new 22@ district explosion; it has become a new icon for the city of Barcelona, and today it is also a brand" for Agbar, says Jordi Mateu, Layetana's marketing and development manager.

