



Medellín, Colombia

## EDIFICIO LOS CAMBULOS

### CHALLENGE

Selecting an HVAC system that would offer minimal inconvenience during its installation and ample efficiency for the rest of its lifetime

### SOLUTION

Y-Series Variable Refrigerant Flow (VRF) from Mitsubishi Electric

### RESULT

Impressive energy efficiency and an installation that didn't interrupt daily business operations



The Cambulos Building (Cambulos) is a mixed-use facility with 23 shops and a 12-story tower with 80 offices. The **32-year-old historic building is located in downtown Medellín**, Colombia's second largest city. Since its opening, the facility's commercial portion was cooled by a water chiller from Mitsubishi Electric. When decades passed and it came time to replace that system, the staff at Cambulos knew they could count on Mitsubishi Electric. Instead of doing another chiller, a different technology and its various features and benefits appealed to Cambulos: Variable Refrigerant Flow (VRF) zoning technology. Cambulos favored VRF for its comfort, quiet operation, easy installation and cleanliness—all with impressive energy efficiency.

**The ground floor of the 16,146-square-foot Cambulos building hosts a variety of shops**, including Calzado BOSI, TV NOVEDADES, EPS salud Total and Calzado Aquiles. These businesses needed updated, cost-effective cooling, but none wanted to close

during renovations. To tackle the problem, Cambulos called in Mitsubishi Electric de Colombia Ltda, Bogotá, Colombia, who had provided and serviced their old HVAC system. The 30-plus years of enjoying Mitsubishi Electric equipment meant Cambulos trusted Mitsubishi Electric de Colombia's guidance and service.

John Stiven Hernandez, Mitsubishi Electric de Colombia's air-conditioning engineer, and Jailer Jimenez, the air-conditioning supervisor of the same company, came up with an idea: Cambulos would remove the old chiller and put in a new VRF system. Jimenez said, "The selected system had to offer a very non-disruptive installation—both in terms of not interrupting the shops' business and avoiding dramatic work to the building itself. VRF could offer that since it does not require the installation of ducts, and therefore doesn't entail major work within a building's ceilings. VRF's space-saving features are also helped by the network of small pipes taking up very little space."

Hernandez spoke to other needs of the new system: “Cambulos’ decision was principally about energy efficiency. They wanted to consume less power, and of course any savings in terms of energy was appealing.

**VRF is highly efficient due to its modulation of refrigerant usage based on actual demand,** making it a good fit.” Jiminez added, “It’s also very quiet”—a must-have for businesses serving customers and patients.

The cherry on top, according to Hernandez: “VRF turned out to be less expensive than putting in a new chiller system.”

When it came time to choose brands, Cambulos compared Mitsubishi Electric and Daikin. They decided to work with Mitsubishi Electric because of its products’ “flexibility, energy efficiency” and “speed of installation,” said Hernandez and Jiminez, respectively. Olga Lucia Palacio, Cambulos’ property manager, said the decision was also about “the extended warranty, good advice and support offered by Mitsubishi Electric de Colombia, which successfully maintained our chiller system for 31 years.”

With a system selected, installation began. “The project was very well-coordinated, and projected benchmarks were met,” said Palacio. Hernandez added, “As projected, **the installation did not disrupt normal operation in the facility. The stores were able to remain open and in operation.** The budget also kept very tightly to the prediction.”

Since installation, Cambulos has been pleased with the “appearance, comfort and improved user satisfaction throughout the commercial premises,” said Palacio. Regarding appearance, Hernandez pointed to the indoor units’ aesthetic qualities and the lack of exposed pipes. The minimal noise level has also been impressive. “Chillers make a lot of noise, but the outdoor VRF units are almost imperceptible. And with the indoor







units, you can't hear them at all," said Hernandez.

User satisfaction has taken the form of *no news is good news*. Hernandez said, "The Cambulos administration is satisfied that **the number of complaints they get from shop owners has dropped to**

**zero**. Preventative maintenance and repairs have also been reduced," furthering the cost savings and overall satisfaction.

In short, as Jiminez said, "It was a very good experience."

## PROJECT TEAM

### Distributor:

Mitsubishi Electric de Colombia Ltda, Bogotá, Colombia

## EQUIPMENT

- ▶ (3) PUHY Y-Series Outdoor Units
- ▶ (43) PKFY Wall-mounted Indoor Units
- ▶ (1) PLFY 4-Way Ceiling-recessed Cassette Indoor Unit