

BASIC IDENTIFICATION**Site name:**

Basilica of Santa Corona

Location:

Vicenza (Veneto, Italy), Contrà Santa Corona

Associated complex:

Dominican convent of Santa Corona (basilica, cloister, conventual buildings)

Geographical context:

Historic centre of Vicenza, within the medieval urban fabric close to the Bacchiglione river, in an area characterised by mendicant foundations and strong civic patronage

Chronological range (site):

Second half of the 13th century – present

Focus period for roofing systems:

Late 13th–14th centuries, with later maintenance and restoration phases

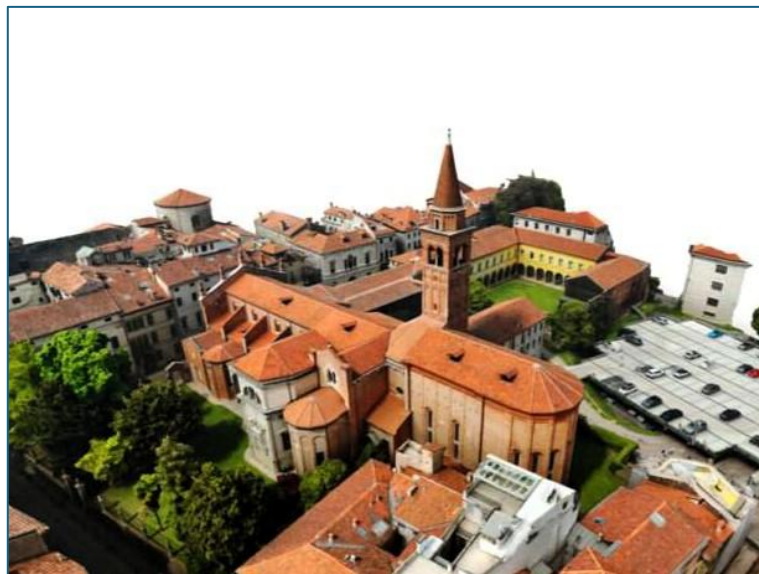


Figure 1. Vicenza, aerial view of the Basilica of Santa Corona. (Source: [Adifly](#))

1. HISTORICAL OVERVIEW

The Basilica of Santa Corona represents one of the most significant Gothic ecclesiastical buildings in Vicenza and constitutes a key reference for understanding the architectural strategies adopted by the Dominican order in the Veneto hinterland. Its foundation is traditionally linked to the arrival of a relic of the Crown of Thorns, brought to Vicenza by the Dominican friar Bartolomeo da Breganze around 1260, an event that immediately conferred symbolic prestige on the church and anchored it within the city's religious and civic life.

Regardless of the precise historical circumstances of the relic's arrival, its cult profoundly shaped the identity of the basilica and justified the construction of a church of exceptional scale and architectural ambition. From its inception, Santa Corona was conceived as a public urban basilica, intended to host large congregations and to support the Dominican mission of preaching, teaching, and engagement with civic institutions.

Within the CaMeRoofs project, Santa Corona is particularly significant as a mendicant Gothic church in which stone vaulting and timber roofing coexist within a vertically stratified construction system, offering valuable insight into the interaction between masonry vaults and timber roof structures in late medieval architecture.

Within the broader context of the CaMeRoofs project, Santa Corona occupies a strategic position as a mendicant Gothic church that combines structural ambition with pragmatic roofing solutions, illustrating how timber and masonry systems could coexist within a single coherent architectural programme.



Figure 2. Vicenza, Basilica of Santa Corona, exterior view. (Source: [Wikimedia Commons](#))

2. BUILDING PHASES AND CHRONOLOGY

2.1 Foundation and Early Construction (c. 1260–1280)

Construction of Santa Corona began shortly after the establishment of the Dominican community in Vicenza, probably in the 1260s. The earliest phase focused on the eastern sector of the church, including the presbytery and the initial bays of the nave, allowing for early liturgical use.

From the outset, the church was conceived with stone rib vaulting as the primary system for covering both the presbytery and the nave, signalling an ambitious architectural programme aligned with contemporary Gothic models.

2.2 Completion of the Nave and Vaulting System (late 13th–14th centuries)

As construction progressed westwards, the nave was completed with a system of quadripartite rib vaults, covering the full width of the central vessel. These vaults define the interior spatial character of the church and fully conceal the timber roof structure above.

Above the stone vaults, a timber roof system composed of trusses (capriate) was constructed to support the external pitched roof. This timber structure does not define the interior space but plays a crucial structural and protective role, ensuring water shedding and safeguarding the masonry vaults below.

The lateral chapels, built progressively along the nave, contributed to stabilising the load-bearing walls and counteracting vault thrusts without the extensive use of external flying buttresses.

2.3 Later Medieval and Early Modern Interventions

Subsequent centuries saw maintenance, repair, and partial renewal of both vaults and timber roof elements. These interventions did not substantially alter the original roofing concept, which remains clearly legible and structurally coherent, allowing for reliable reconstruction of the medieval construction phases.



Figure 3. Vicenza, Basilica of Santa Corona, interior view. (Source: A. Passuello)

3. STRUCTURAL AND TYPOLOGICAL ANALYSIS OF THE ROOFING SYSTEMS

3.1 A Vertically Stratified Roofing System

Santa Corona is characterised by a two-level roofing system:

- Stone rib vaults define the interior spaces of both presbytery and nave.
- Timber trusses above the vaults support the external roof covering.

This configuration reflects a mature Gothic solution in which spatial, structural, and protective functions are clearly separated.

3.2 Rib Vaulting of the Nave and Presbytery

Both the presbytery and the nave are covered by quadripartite rib vaults. Structurally, the ribs concentrate loads and channel them towards the piers and perimeter walls, while the infill webs reduce overall mass.

From a symbolic and spatial perspective, the continuous use of vaulting reinforces the monumentality of the basilica and aligns Santa Corona with ambitious mendicant churches that adopted full masonry covering systems.

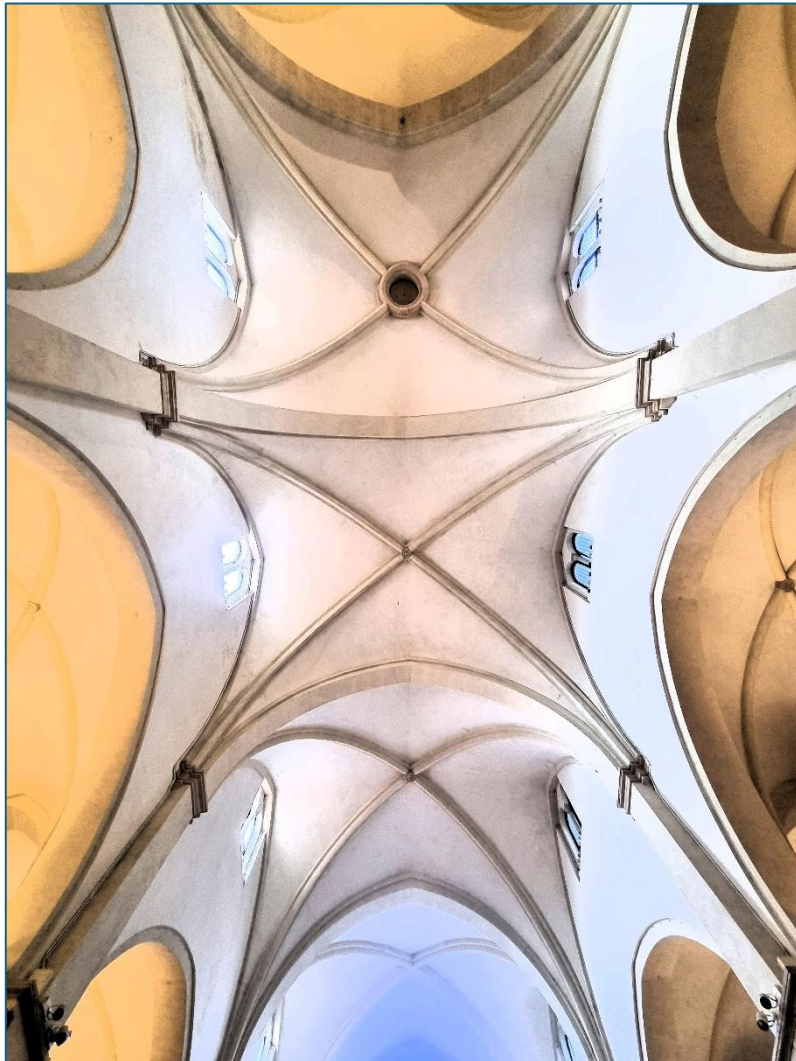


Figure 4. Vicenza, Basilica of Santa Corona, quadripartite rib vaults of the central nave. (Source: A. Passuello)

3.3 Timber Roof Structure above the Vaults

The timber roof system, composed of capriate, is located above the masonry vaults and is not visible from the interior. Its primary functions are:

- supporting the external roof covering;
- protecting the vault extrados from weather exposure;
- allowing inspection, repair, and replacement without interfering with the liturgical space below.

Typologically, this solution reflects a widespread Italian practice in which timber roofs act as a protective superstructure rather than as an interior-defining element.

3.4 Structural Behaviour and Long-Term Performance

The combination of stone vaults and an independent timber roof results in a structurally robust system. Vault thrusts are managed by wall thickness and chapel articulation, while the timber roof carries only vertical loads from the roof covering. This separation of roles has contributed significantly to the building's long-term stability.

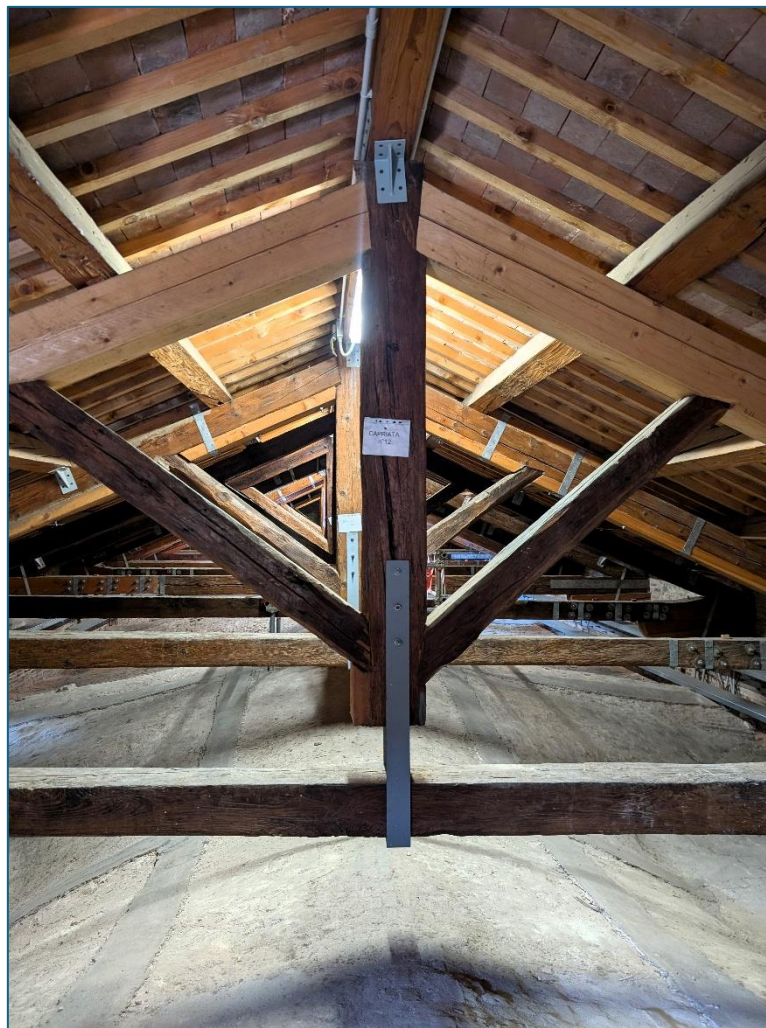


Figure 5. Vicenza, Basilica of Santa Corona, detail of the attic spaces above the central nave. (Source: A. Passuello)

4. CONTEXTUALIZATION OF THE ROOFING SYSTEMS

4.1 Santa Corona within Dominican Architecture

Santa Corona illustrates a Dominican architectural strategy that embraces Gothic vaulting while maintaining constructive pragmatism through the use of timber roofing above the vaults. This approach balances monumentality, durability, and maintainability.

4.2 Comparison with San Lorenzo (Vicenza)

Unlike a simplified opposition between timber-roofed and vaulted naves, both Santa Corona and San Lorenzo in Vicenza are characterised by naves covered by ribbed vaults, with timber truss roofs located above the vaults and not visible from the interior. Together, the two churches illustrate a shared mendicant strategy in which masonry vaulting defines the liturgical space, while timber roofing systems act as independent protective superstructures within the same urban context.

4.3 Veneto and European Comparisons

The system adopted at Santa Corona aligns with Italian Gothic traditions, where timber roofs frequently coexist with masonry vaults as secondary protective structures. This contrasts with many transalpine Gothic buildings, where the roof structure is often more closely integrated with the vaulting system.

4.4 Symbolic and Practical Dimensions

The continuous vaulting of the interior space reinforces the solemnity and unity of the liturgical environment, while the concealed timber roof serves practical conservation and structural purposes. Roofing systems thus operate both as symbolic markers and as technical devices.

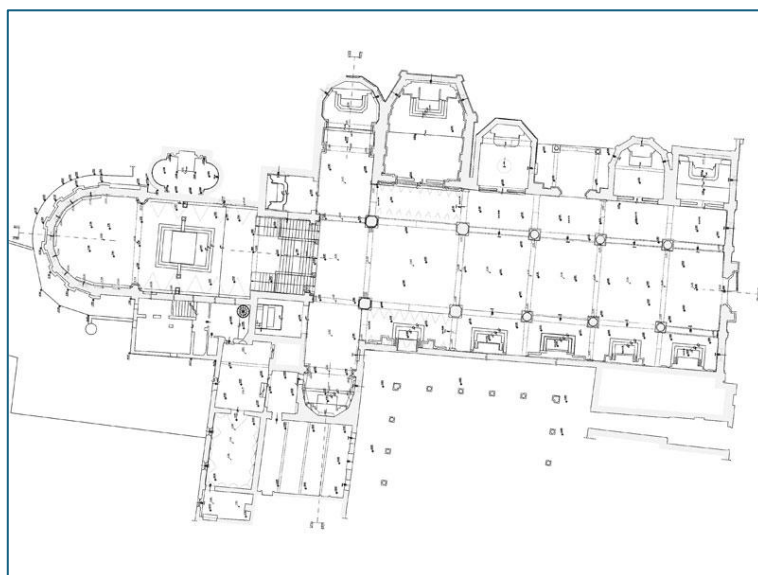


Figure 6. Vicenza, Basilica of Santa Corona, plan of the church showing bay articulation. (Source: [SM Ingegneria](#))

5. RESTORATION HISTORY AND CONSERVATION STATUS

Restoration campaigns in the late 20th and early 21st centuries focused primarily on the timber roof structure above the vaults, addressing issues of biological decay, deformation of trusses, and corrosion of metal joints.

Engineering assessments confirmed the effectiveness of the original separation between vaults and roof, allowing for targeted interventions that preserved the historic configuration. Today, both the masonry vaults and the timber roof system are in stable condition and continue to perform their respective structural and protective roles effectively.

6. ESSENTIAL/SELECTED BIBLIOGRAPHY

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