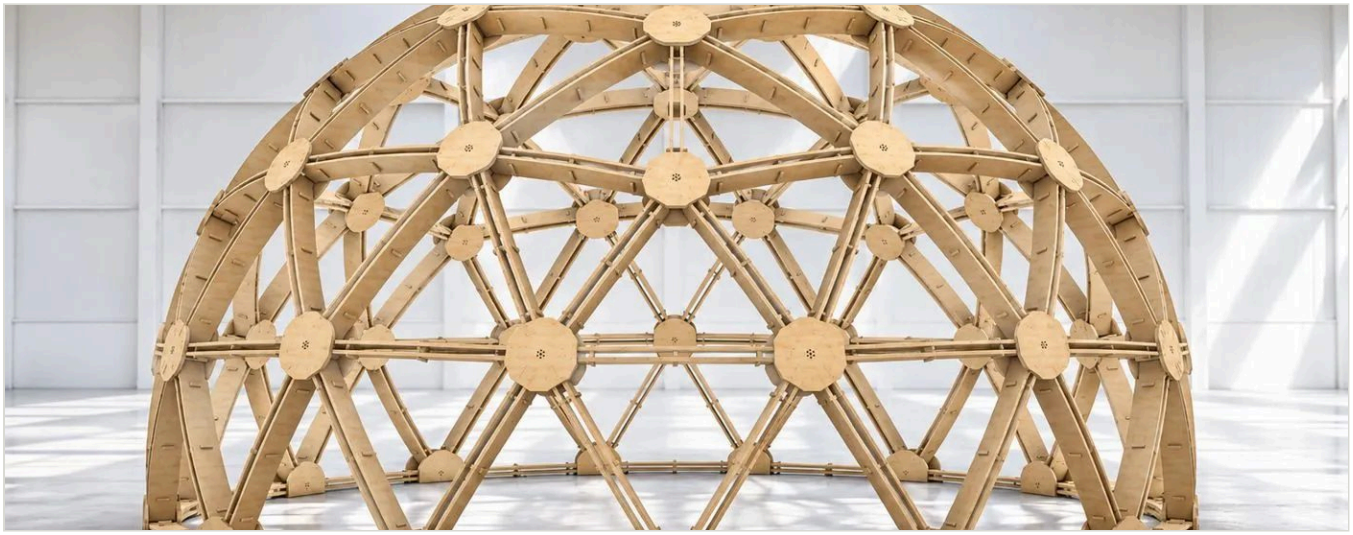
VFLY
DIGITAL DESIGN & FABRICATION

DOMOS VALDIVIA
GEOMETRÍA MODULAR

TECHNICAL OVERVIEW · 2026

# Construction systems

One geometry, several ways to build it. We develop each structure with the system that best fits its size, its complexity, the materials available and the way it will be assembled, and we deliver the fabrication plans to build it.



## WHICH SYSTEM FOR WHICH GEOMETRY

| SYSTEM | GEODESIC DOME | QUADROSPHERE | ZOME |
|---|---|---|---|
| **Good Karma**<br>Sawn timber | ■ | ■ | ■ |
| **Metal nodes**<br>Timber + steel | ■ | ■ | ■ |
| **Double beams + metal connectors**<br>Sawn timber + steel | ■ | ■ | ■ |
| **Polywood CNC + Polywood nodes**<br>CNC | ■ | ■ | ■ |
| **Solid panels + CNC interlocking**<br>CNC | — | ■ | ■ |

Zollinger roof: its own system, in sawn timber or CNC (page 7). Glamping modules (cube, oval, cabin, capsule, egg, gothic, tunnel, shell): Polywood CNC. Every model is configured to the size of your project.

01 SAWN TIMBER · MODULAR

# Good Karma

A modular system with no independent connectors. Every timber component is cut precisely to length and angle and joined edge to edge, without additional hardware.

### MATERIAL

Sawn, calibrated timber. You tell us the thickness of your timber in mm and the cutting data is calculated for it.

### HOW IT IS CUT

By hand, with a mitre saw, following the cut list: long point, short point and mitre angle for every board.

### EDGES

Optionally bevelled.

### MIXED-CUT VARIANT

Combines two cutting systems to handle more complex geometries while keeping a precise, strong assembly.

### GEOMETRIES

Geodesic domes, Quadrospheres and Zomes.

#### WHAT THE PLANS INCLUDE

- Fabrication drawings
- Parts list (cutting schedule)
- Cutting lengths and angles
- Part numbering
- Assembly and erection sequence
- 3D views



Zome built with the Good Karma system.



Good Karma joint: parts meet edge to edge, no connectors.



Quadrosphere assembled in modules (mixed-cut variant).

02 TIMBER + STEEL CONNECTORS

# Metal nodes

A timber structure joined by steel connectors designed specifically for each node of the geometry.

MATERIAL

Sawn timber members with steel node connectors.

RECOMMENDED FOR

Large projects (over 12 m in diameter) and very complex geometries, where metal connectors resolve the nodes better.

GEOMETRIES

Geodesic domes, Quadrospheres and Zomes.

WHAT THE PLANS INCLUDE

- Fabrication drawings
- Parts list (cutting schedule)
- Cutting lengths and angles
- Part numbering
- Assembly and erection sequence
- 3D views



Six-arm steel connector, CNC cut, with fixing holes for the timber members.

03 SAWN TIMBER · DOUBLE BEAMS

# Double beams + metal connectors

A structure of double sawn-timber beams joined by metal connectors: either a laser-cut plate connector or a tubular connector.

MATERIAL

Double sawn-timber beams with laser-cut or tubular steel connectors.

PERFORMANCE

Structurally stiffer, with better thermal insulation results.

RECOMMENDED FOR

Large projects (over 12 m in diameter) and very complex geometries.

GEOMETRIES

Geodesic domes, Quadrospheres, Zomes and special projects.

### WHAT THE PLANS INCLUDE

- Fabrication drawings
- Parts list (cutting schedule)
- Cutting lengths and angles
- Part numbering
- Assembly and erection sequence
- 3D views



Laser-cut connector for the double-beam system.



Tubular steel connector, also compatible with double beams.

04 DIGITAL FABRICATION · CNC

# Polywood CNC + Polywood nodes

Members and nodes are machined digitally in Polywood, a premium furniture-grade plywood. The structure is fully timber; the only metal parts are the support anchors.

MATERIAL

Polywood panels, CNC machined.

JOINTS

Nodes and members interlock with machined slots and tenons; every part is engraved with its code.

GEOMETRIES

Geodesic domes, Quadrospheres and Zomes. All our glamping modules are also made in Polywood CNC.

### WHAT THE PLANS INCLUDE

- CNC cutting vectors
- Parts list and dimensions
- Machining details
- Part numbering and identification
- Fabrication files
- Assembly documentation



Geodesic dome machined in Polywood: members and nodes in timber.



Polywood node receiving double members.



Quadrosphere with timber nodes; metal only at the supports.

05 DIGITAL FABRICATION · CNC

# Solid panels + CNC interlocking

Solid timber panels machined by CNC with interlocking, puzzle-type joints.

MATERIAL

Solid timber panels such as CLT, CNC machined.

JOINTS

Interlocking puzzle joints cut into the panels themselves.

GEOMETRIES

Quadrospheres and Zomes.

WHAT THE PLANS INCLUDE

- CNC cutting vectors
- Parts list and dimensions
- Machining details
- Part numbering and identification
- Fabrication files
- Assembly documentation



CNC Quadrosphere for CLT panels with machined interlocking joints.



CNC Zome for CLT panels with machined interlocking joints.

06 SAWN TIMBER OR CNC · LAMELLA LATTICE

# Zollinger roof

A curved roof made of a lattice of short timber pieces that cross each other in a diamond pattern. All the pieces are the same, they are assembled to one another and spread the load across the whole lattice.

MATERIAL

Sawn timber, or boards cut by CNC.

SUPPORTS

Edge arches and base beams.

CLADDING

Can be clad (shown without cladding).

GEOMETRY

Curved roofs and vaults.

WHAT THE PLANS INCLUDE

- Fabrication drawings
- Parts list
- Cutting lengths and angles
- Part numbering
- Assembly sequence
- CNC cutting vectors (CNC version)



Zollinger roof: short timber pieces in a diamond lattice over edge arches.

CHOOSING A SYSTEM

# Every geometry needs its own solution

We do not sell a single prefabricated system. The right system is defined by the geometry, its dimensions and floor area, its complexity and number of parts, the materials and their local availability, transport and the assembly method.

## Rules of thumb

**Mitre saw and sawn timber:** Good Karma.

**Over 12 m or very complex geometry:** metal nodes or double beams with metal connectors.

**Better thermal insulation:** double beams with metal connectors.

**Access to a CNC router:** Polywood CNC or solid CNC panels.

**Prefabricated, numbered kits:** Polywood CNC.

## Cladding and roofing options

Asphalt shingles

Asphalt membrane

Aluminium composite panel (ACM)

Single glazing or double glazing

Solid polycarbonate

The choice depends on the design of each project.

## About the plans

Fabrication plans for the structure only: not architectural or permit drawings.

Delivery from less than 24 hours, depending on geometry, size and system.

All measurements come from the 3D model, in millimetres.

Interior architecture is quoted separately.

## Projects outside Chile

We adapt the design to the materials available in your country.

We can work from your own 3D model (OBJ) and specifications.

CONTACT

## Tell us what you want to build

WhatsApp **+56 9 7104 2780** Instagram **@domosvaldiviachile**