GIRAFFE

ASSEMBLY SUPPORT

PRACTICAL

For quick and easy assembly of walls and floors made of timber elements.

PRECISE

Quick adjustment with automatic lock.

LENGTH

The 6,0 metre long version offers support even over long distances.

GIR4000
GIR6000

GIR3000

GIR3000
GIR4000
GIR6000

GIR2200

GIR3000

GIR4000

GIR6000

CHARACTERISTICS

FOCUS	temporary assembly support
LENGTH	from 220 cm to 600 cm
LOAD CAPACITY	up to 20 kN
FASTENING	HBS PLATE Ø10, SKR Ø12

VIDEO

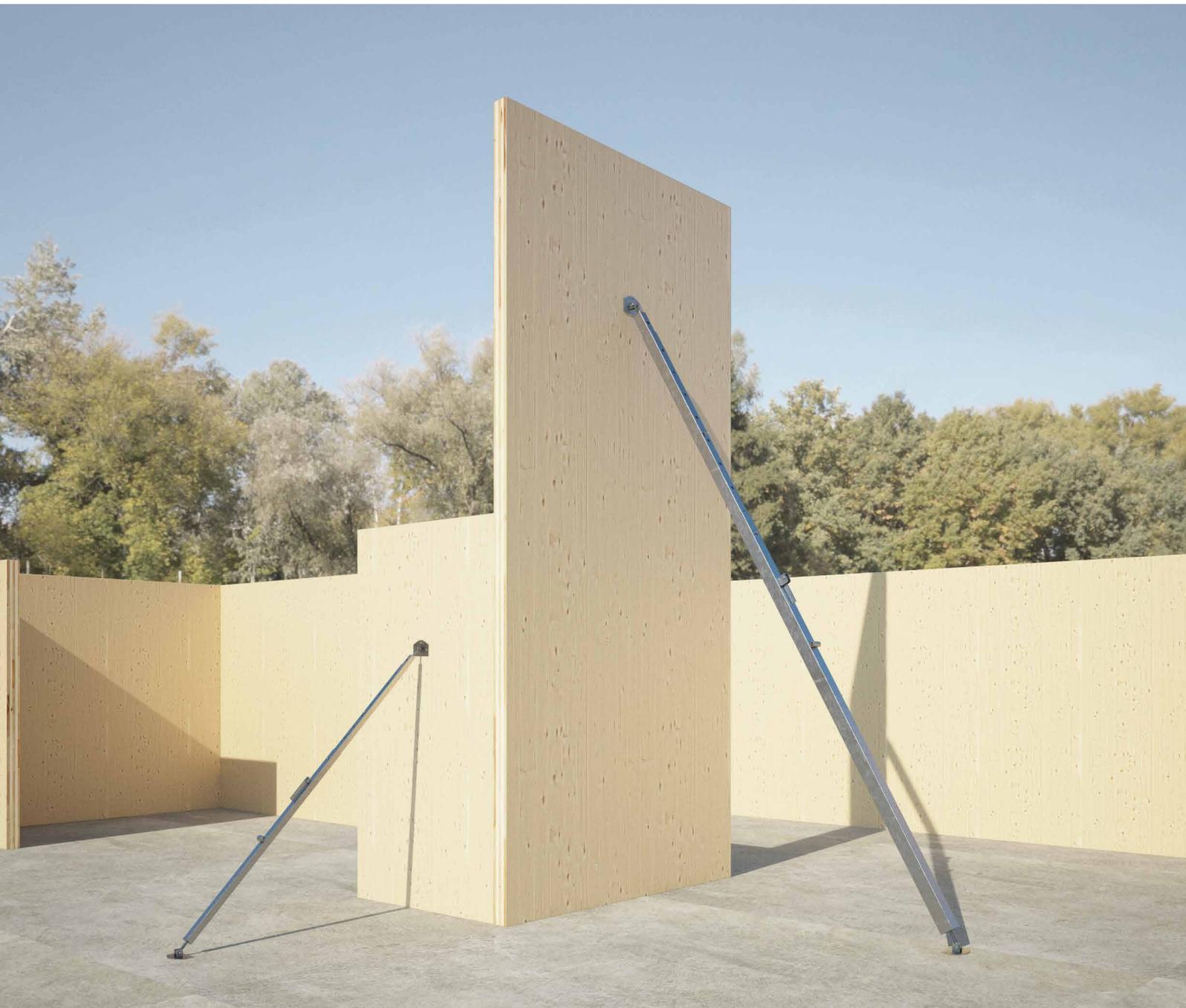Scan the QR Code and watch the video on our YouTube channel

MATERIAL

GIR3000 and GIR4000 in zinc plated steel; GIR2200 and GIR6000 in extruded 6060 aluminium.

FIELDS OF USE

Temporary support for the assembly of CLT floors and walls, prefabricated timber framing elements, glulam supports and pillars and more.

TWO STOREYS

GIR6000 acts as a practical and safe support to be used even in case of distant elements extending up to two storeys.

ORGANISED

The practical transport element allows to handle and store up to 10 GIRAFFE in an orderly manner.

CODES AND DIMENSIONS

CODE	length [mm]	profile [mm]	weight [kg]	adjustment [mm]	pcs
GIR2200	1180 - 2200	40 x 40 / 35 x 35	3,35	100 + 100	1
GIR3000 (with locking stop)	1750 - 3000	40 x 40 / 35 x 35	9,80	100 + 100	1
GIR4000	1750 - 4000	45 x 45 / 40 x 40 / 35 x 35	13,0	100 + 100	1
GIR6000	2120 - 6000	80 x 80 / 68 x 68 / 55 x 55	27,0	135 + 135	1

OPTIONAL ITEMS

| CODE	description	pcs
GIRPLATE	small spare plate (without threaded rod)	1
GIRPLATEL	large spare plate (without threaded rod)	1
GIRPLATE90	spare plate with 90° edge (without threaded rod)	1
METSP	spare dowel for GIR4000	1
GIRHOLDER	transport element compatible with 10x GIR3000, 10xGIR4000 or 8xGIR6000	1

GEOMETRY AND INSTALLATION
ANCHOR PLATE
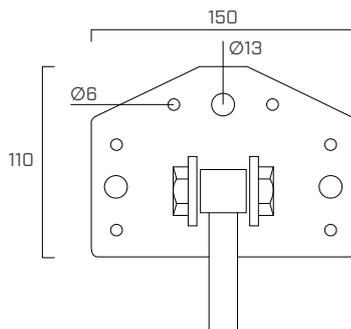
GIRPLATE: SUITABLE FOR GIR2200/GIR3000/GIR4000

Plate thickness	[mm]	4
no. holes	Ø13	3
no. holes	Ø6	6
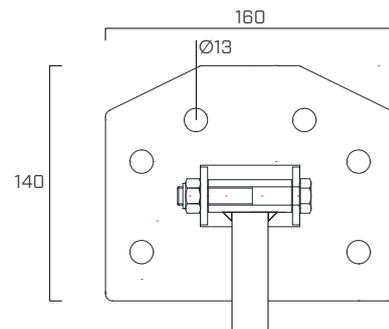
GIRPLATEL: SUITABLE FOR GIR6000

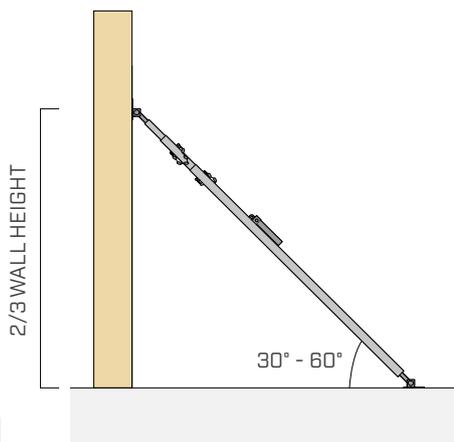| Plate thickness	[mm]	6
no. holes	Ø13	6

DIMENSIONS
TRANSPORT ELEMENT
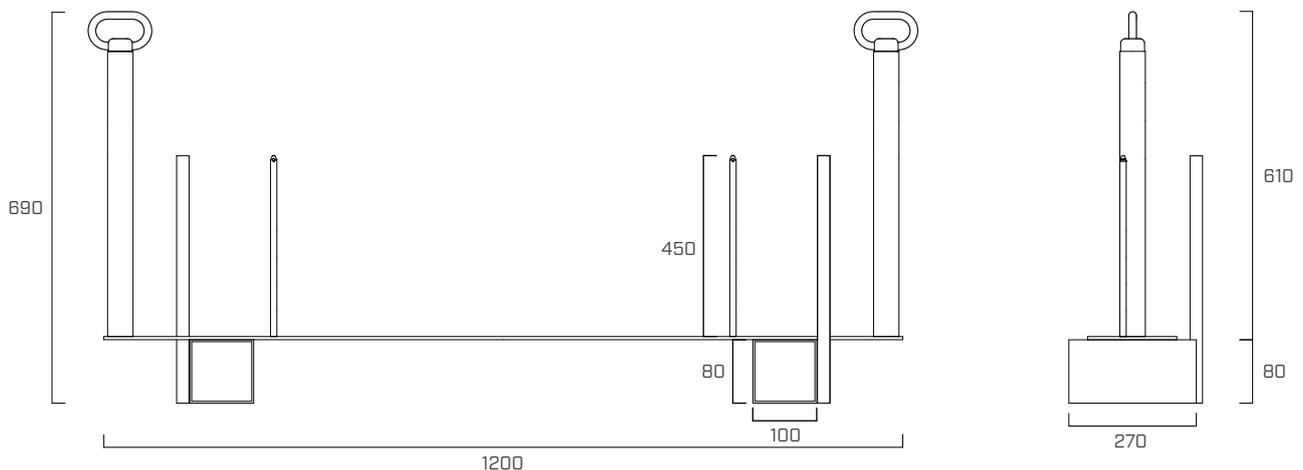
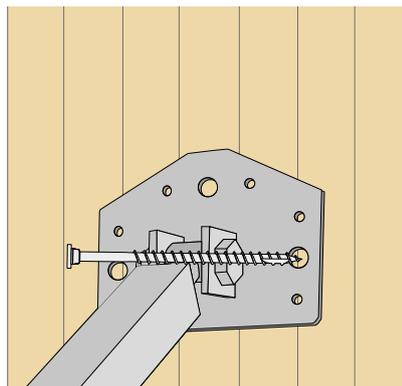**GIRHOLDER: suitable for GIR3000, GIR4000 and GIR6000**

GIRAFFE INSTALLATION

1. Place GIRAFFE on the wall and adjust its length accordingly. The support must be applied in the upper third of the wall. The angle of GIRAFFE must be between 30° and 60°.
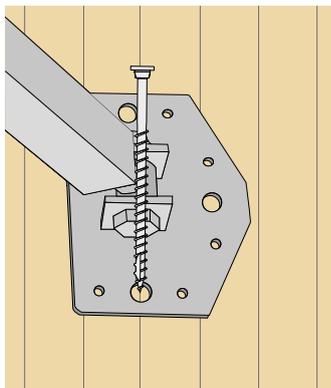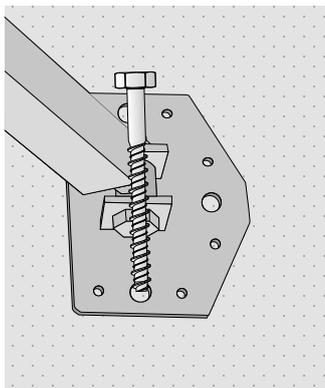
HBS PLATE Ø10

2. Fix the GIRAFFE plate to the wall using the HBS plate screws.
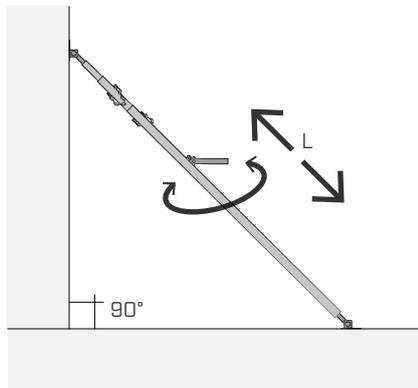
TIMBER FLOOR
HBS PLATE Ø10

CONCRETE FLOOR
SKR Ø12

3. Fix the GIRAFFE plate to the timber floor using the HBS PLATE screws and to the concrete floor using SKR anchors.

4. Position the wall precisely by setting the length of GIRAFFE by means of the adjustment handle.
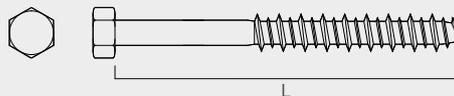

CONNECTORS:

JOINT ON TIMBER - HOLES Ø13

HBS PLATE Ø10 - pan head screw
L = 100 - 180 mm*

JOINT ON CONCRETE - HOLES Ø13

CE
ETA-11/0030

SKR Ø12 - screw anchor for concrete
L = 100 - 400 mm*

* The choice of length of the connection is assessed each time in function of the element to be supported, the type of support on which GIRAFFE is used and the load to be sustained.

STRUCTURAL VALUES*

	GIR2200	GIR3000			GIR4000			GIR6000			
deflection [m]	2,20 [m]	1,75 [m]	2,40 [m]	3,00 [m]	1,75 [m]	2,85 [m]	4,00 [m]	3,00 [m]	4,00 [m]	5,00 [m]	6,00 [m]
R_{max} [kN]	2,52 [kN]	12,00 [kN]	10,90 [kN]	6,55 [kN]	15,55 [kN]	8,33 [kN]	5,57 [kN]	20,36 [kN]	17,45 [kN]	11,64 [kN]	6,33 [kN]

(*) The values indicated refer to the load capacity in the direction of the axis of the assembly support and have been determined based on tests and calculations. When subjected to excessive loads, the support deforms without breaking.
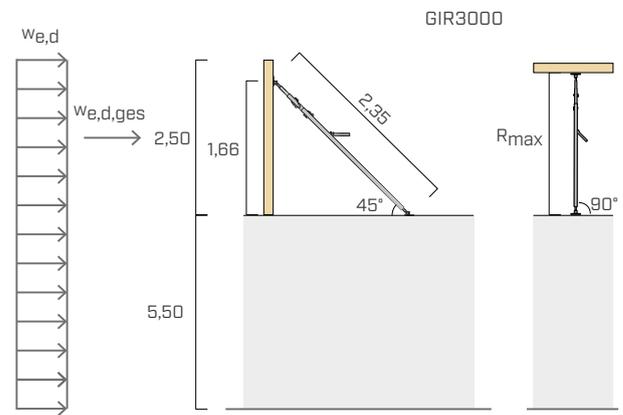
CALCULATION EXAMPLE

GEOMETRY

A = L x H = 5,00 m x 2,50 m = 12,50 m^2

REQUIREMENTS

Wind zone 1, height above sea level: 214 m, building height: z = 5,50 m.

GIR3000

CALCULATION

WIND LOAD ACTION ACCORDING TO EUROCODE 1991-1-4

v_b	Basic speed	(according to national wind zone map)	25,0	m/s
q_b	Basic dynamic pressure	$0,5 \cdot p \cdot v_b^2 \cdot 10^{-3} = 0,5 \cdot 1,25$ (kg/m^3) $\cdot 25,0^2$ (m/s) $\cdot 10^{-3}$	0,39	kN/m^2
$q_{p(z)}$	Peak wind speed	$1,7 \cdot q_b \cdot (z/10)^{0,37} = 1,7 \cdot 0,39 \cdot (8/10)^{0,37}$	0,61	kN/m^2

EFFECT ON THE WALL

$w_{e,d}$	Reference basic speed	$\gamma_Q \cdot q_{p(z)} = 1,5 \cdot 0,61$	0,92	kN/m^2
$w_{e,d,ges}$	Total wind action load on the wall	$w_{e,d}$ (kN/m^2) $\cdot$ A (m^2) = 0,92 $\cdot$ 12,5	11,50	kN

CHOICE OF ASSEMBLY SUPPORT

2 x GIR3000 installed at a length of approx. 2,40 m:

VERIFICATION OF AN ASSEMBLY SUPPORT

$F_{ax,Gir} = 1/2 \cdot w_{e,d,ges} / \cos(\alpha) = 1/2 \cdot 11,50 \cdot \cos(45°) = 4,07$ kN $< R_{max,GIR3000 ; L = 2,40} = 10,90$ kN ✅

VERIFICATION OF FASTENERS

Fastening on wall and floor with 2 x HBSP 10 x 100 each

Shear strength:
$R_{v,d} = 2 \cdot 6,01 \cdot (1,0 / 1,3) = 9,24$ kN

Axial resistance of the thread:
$R_{ax,d} = 2^{(0,9)} \cdot 9,47 \cdot (1,0 / 1,3) = 13,59$ kN

COMBINED VERIFICATION OF FASTENING

on wall:
$(\sin(45°) \cdot 4,07 / 9,24)^2 + (0,5 \cdot 11,50 / 13,59)^2 = 0,28 < 1,0$ ✅
on the ground:
$(\sin(45°) \cdot 4,07 / 13,59)^2 + (0,5 \cdot 11,50 / 9,24)^2 = 0,43 < 1,0$ ✅

NOTES:

- The load capacities have been determined in accordance with EN 1995:2014, EN 1993:2005 and in accordance with the ETA-11/0030 certificate and the tests carried out; they refer exclusively to the assembly support, type of fastening and angle of inclination indicated.
- The values $\gamma_M = 1,3$ and $k_{mod} = 1,0$, according to EN 1995-1-1, have been selected for the calculation. The shear value of a thin plate was considered for the strength of the screw.

- When fastening the bottom or top plate, the maximum permissible screwing torque of the fastenings elements must be observed.
- Prerequisites for the load-bearing capacity assumption are the complete screwing of the screws and compliance with the minimum distances from the edge in accordance with EN 1995-1-1.