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Wood and steel reinforced access control solutions

## **OUR MISSION**

Enhance the safety and quality of open spaces and streets, in both urban and rural areas, ensuring they are fully embraced and utilized by their communities.







For everyone's benefit, wood is becoming an increasingly important part of our lives. It blends seamlessly into our surroundings, adding warmth to our public spaces and providing the ideal link between the urban landscape and nature.

When carefully selected and treated with respect, wood offers numerous advantages.

With this philosophy, we have developed our SOLONATURE® range of wooden urban and road infrastructure: natural, aesthetic and safe landscaping solutions designed to last.

## WOOD AND STEEL



Aesthetics and physical strength: a combination that will last through time and resist wear

#### CRAFTSPEOPLE WHO LISTEN TO YOU

We're craftspeople owing to the fact that our experience with wood is part of the company's history, but also because we see each project as unique.

Creating a bespoke project, adapting landscaping to an existing configuration or need small batch manufacturing?

Our production sites are ready to meet your needs!

#### A MANUFACTURER WHO ENSURE YOUR SUPPLIES

Thanks to the size of our teams and our production capacity, we are able to post complete infrastructure projects and deal with large linear runs rapidly, making us a comprehensive industrial partner.

Unlike standardised ranges, SOLONATURE® is committed to offering a range of quality products, uniquely designed. They combine the best of metal and wood, combining the physical properties of hot-dip galvanised steel with the aesthetic appeal of autoclaved Scots pine.

This unique combination includes exclusive fencing, bollards, height restrictors and access control solutions. SOLONATURE® guarantees that products are built to last and are more resistant to accidents and vandalism.





## VERSATILE INDUSTRIAL EXPERTISE

#### SOLOSAR combines the skills of ISO 9001-certified production sites: 2015:



Manufacturing sites for the production of steel parts and galvanising



Complementary capabilities in which we have deep expertise to guarantee you high quality.



Assembly and pre-assembly site in Sarreguemines (Moselle).



Sawmill with 5-axis custom machining and autoclave treatment of solid wood

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## A GENUINELY ENVIRONMENTALLY FRIENDLY AND LOCAL RANGE

Buying environmentally friendly means understanding what an environmentally friendly product is.

This is a product that has less impact on the environment throughout its life cycle, i.e. from the extraction of its raw materials to its design, transport, use and recycling.

An environmentally friendly product is one that **consumes less CO2** (the main greenhouse gas responsible for global warming) or requires **less water and energy** to manufacture.

To reduce your environmental footprint, it's best to buy a product made in France or Europe, or from materials sourced in Europe. Transport is the second biggest contributor to greenhouse gas emissions after energy and electricity production! SOLONATURE® comes from sustainably managed forests and 85% of our raw materials are sourced within a 170 km radius of our factory in Moselle.

Finally, a repaired product means **one less product to recycle, and therefore less pollution**! In the event of a product defect, you are covered by a legal warranty of at least 2 years in Europe.

SOLOSAR goes even further, with a 10-year guarantee against premature rotting of the wood components, creating a sustainable, responsible and local investment. All our products are designed and assembled in Sarreguemines (Moselle) in France.



## THE BENEFITS OF AUTOCLAVED WOOD

Wood is by nature an **environmentally friendly and renewable** material. Forests play an important role in **maintaining biodiversity** and in combating desertification and global warming. It's not a tree, it's actually a carbon sink!

Transforming wood into a building material requires little energy. What's more, wood is a modern building material, perfectly capable of competing with other building materials in terms of technical, functional and aesthetic performance.

Here are at least 10 good reasons to choose wood:

#### 1. natural and renewable

Europe's forests cover almost 140 million hectares (more than a third of the EU's surface area). Wood is **vastly under-exploited**. Forests have not been ravaged and have great production potential.

### 2. combating global warming and the greenhouse effect

Trees work like a **CO<sup>2</sup> pump**, helping to limit the greenhouse effect linked to the use of fossil fuels. Well-thought out use of our forests, time and space-wise, is therefore a simple solution for improving air quality.

#### 3. totally recyclable and biodegradable

When impregnated in accordance with new European directives, autoclaved wood **is 100% recyclable** through normal waste channels, and construction waste (cuttings) is too. Unlike other materials.

#### 4. helps manage biodiversity

Europe's forests are reforested responsibly, with a view to **preserving the biodiversity** of the original species.

#### 5. amazing physical properties

The physical capabilities of wood are impressive. For example, a 3-metre long beam on two posts, to which a 20-tonne load must be applied, will weigh: 60 kg in wood, 80 kg in steel and 300 kg in reinforced concrete.

#### 6. a national economic asset

From forestry to finished product, the timber industry in France generates **more than 500,000 direct and indirect jobs.** It represents more jobs than the automotive sector.

#### 7. Faster production times than steel or concrete

The construction time must be taken into account when calculating the cost of a project. From this point of view, woodbased construction systems are very efficient. Thanks to their high added value in prefabrication, **they save a great deal of time**.

#### 8. Ensures a clean worksite

Wood makes for a clean, safe, economical and environmentallyfriendly building site.

#### 9. production flexibility and truly bespoke

Available in all diameters and lengths, wood as a raw material means that **even small quantities can be made for customised production.** 

#### 10. limited maintenance costs

The interchangeability of components of the wood-based structure (an advantage of "dry" materials) means that these operations can be carried out faster and with less disruption, which has a positive impact on the cost of using the structures.

Class 4 NF ENTED SUMME 10 years guarantee







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## CLASS 4 AUTOCLAVED SCOTS PINE PROTECTION

All the Scots pine used to produce SOLONATURE® solutions is impregnated exclusively to protection class 4 in accordance with standard EN 335. Only autoclaved "vacuum and pressure" impregnation is truly effective, giving our solutions a 10-year guarantee against premature rotting caused by fungal attack or wood-eating insects.

#### The natural movement of wood

When the "free" water has completely disappeared, all that remains is the bound water that impregnates the wood fibres. Before impregnation, the moisture content of the wood must be less than 30% (level of fibre saturation). Below this level, the wood will shrink and warp. The aim of the treatment is to stabilise these variations and combat natural attack.

#### «Vacuum and pressure » autoclave

We impregnate Scots pine in a vacuum and pressure autoclave to achieve Class 4 protection to EN 335. When treated like this, it is a modern material that can compete with other building materials in terms of technical, functional and aesthetic performance.

#### 100% chromium and arsenic free and complies with the European Biocide Directive

In compliance with the European Environmental Biocide Directive, our wood treatment process does not contain chromium or arsenic and complies with EN 335. Our products are manufactured without glues or solvents.

#### Protection at its core

As a living material, wood breathes, shrinks and expands. After treatment, the wood may crack as a natural reaction to the autoclave process. This does not affect the quality or durability of the material, which is protected right to its core. Similarly, UV-sensitive wood may turn grey over time. Again, this does not affect the durability of the material.



1. Vacuum process



2. Delivery of the wood impregnation solution



3. Pressurization



4. Final vacuum



Each component is fitted with a clip bearing a batch number and year of manufacture to guarantee the tenyear warranty. l.



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## COMPLETE SAFETY

FOR ALL ROAD USERS AND ROAD MANAGERS





The increased usage of open spaces by the public and the integration of soft mobility and alternatives to the car are now major challenges for all local authorities.

Just as parents put protective helmets on their children when out cycling, SOLONATURE® access control solutions guarantee peace of mind and total security for the owner, installer and users.

Because outdoor spaces are now shared by many different types of users, and in order to ensure that outdoor activities are always enjoyable, SOLOSAR places **safety and durability at the heart of all its product developments.** 

For example, we work almost exclusively with logs or half logs to avoid roughness, sharp edges and protruding corners, and most of our solutions have **a 45° chamfer** for added safety.





# WHY IS ACCESS CONTROL AN IMPORTANT TOPIC NOWADAYS?

New travel habits within villages and towns have changed the way we look at the community and mobility. Cycling, scooter riding, running and walking all require **open spaces to be shared by all.** To avoid anarchy and allow everyone to move around in safely, **SOLONATURE®** access control solutions provide **security**, **guidance**, **direction and orientation**, making them the keystone of this new mobility paradigm.

Playgrounds, car parks, car sharing areas, cycle paths and footpaths all need **to be made safe** with solutions tailored to the real needs and budget of the local authority managing them. In response to **environmental challenges**, wood - the most environmentally friendly material - is now obviously the choice. And as part of this collective awareness-raising process, we are also obviously on hand to help you bring sustainable, **environmentally-friendly** urban development and road projects to life.





## ACCESS CONTROL

#### A MAJOR CHALLENGE TODAY

In response to **environmental challenges**, wood - the most environmentally friendly material - is now obviously the choice. And as part of this collective awareness-raising process, we are also obviously on hand to help you bring sustainable, **environmentally-friendly** urban development and road projects to life New travel habits within villages and towns have changed the way we look at the community and mobility. Cycling, scooter riding, running and walking all require open spaces to be shared by all. To avoid anarchy and allow everyone to move around in safely, SOLONATURE® access control solutions provide security, guidance, direction and orientation, making them the keystone of this new mobility paradigm.

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## PRODUCT MATRIX

100 M

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**Ona** 

The entire SOLONATURE® range, arranged by solution type.

## PRODUCT MATRIX FIXED EMBEDDED BOLLARDS

#### Ready-to-install fixed bollard

Solid wood For installation in concrete block Diam. : 140mm Height 1000 mm above ground With reflective sheet cl. 2 Pre-assembled



#### **RICANTO** bollard

With embedded or sunken steel Cl00 post into the ground for optimum strength without sacrificing the aesthetic appeal of the wood. Height 700 mm above ground





## **PRODUCT MATRIX** SINGLE OR DOUBLE LEAF SWING GATE BARRIERS

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#### Narrow road. Moderate risk of vandalism.













Wide roads. Increased risk of vandalism.

SINGLE LEAF SWING gate Wood & steel Horizontal wooden rail + steel bracing Passage width 2 to 3 m Double leaf swing gate available in widths of 5 or 6 m

#### DOUBLE LEAF SWING gate

Wood & steel Horizontal wooden rail + steel bracing Passage width **5 or 6 m** 

#### **CHICANE** Set

Wood & steel 1 combination of 2 locking gates on the swivel post Standard passage width **2 m** Available in 1 m or 1.50 m versions for narrow roads

#### EDGE gate

wood & steel reinforced

Horizontal wooden rail reinforced with steel tube Passage width **3 to 4 m** 

#### **DURANCE** gate

wood & steel reinforced and integrated concealed padlock Horizontal wooden rail reinforced with steel tube Passage width **3.50 m** 

Lock in open position

## Closed position with optional fireman's padlock

Autoclaved solid wood catch post and counter catch post



#### SLIDING gate Solid wood version

Ready-to-install pre-assembled posts

Passage width **2 or 3 m**.

#### REINFORCED SLIDING gate Wood & steel reinforced version

Ready-to-install pre-assembled posts

Passage width **3 m** 





## PRODUCT MATRIX HEIGHT RESTRICTION PIVOTING GANTRIES

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HGVs and lorries



Wood & steel gantry

Single leaf swing

Completely pre-assembled and ready to

install on a concrete base. Easy to open.

Height 2.25 m - Passage width 2 or 3 m.





#### Wood & steel gantry double leaf swing

Completely pre-assembled and ready to install on a concrete base. Easy to open. Height 2.25 m - Passage width 5 or 6 m.



Wood & steel single or double leaf swing gantry special for HGVs

Completely pre-assembled and ready to install on a concrete base. Easy to open. Height 2.30 to 4 m (made to measure) Passage width 5 or 6 m.



Standard vehicle



Hanger kit To fit a reflective strip (not supplied).

## PRODUCT MATRIX AUTOCLAVED SOLID WOOD FENCING

High fence





ROMA fence single - double - triple rail Interlocking horizontal rails, no need for screws or glue just embed in solid concrete. Made entirely of autoclaved solid wood

Available in square post and steel version (see TREVI model)



#### MILANO fence

Interlocking horizontal rails, no need for screws or glue just embed in solid concrete. Made entirely from autoclaved solid wood.

SOLOSAR pre-assembled railing module to save time on your site.





#### **TORINO fence**

Interlocking horizontal rails, no need for screws or glue just embed in solid concrete. Made entirely from autoclaved solid wood.

SOLOSAR pre-assembled railing module to save time on your site.

#### LONDON fence

Machined tongue and groove post

To be **sleeper-screwed** and then embedded in concrete. Made entirely from autoclaved solid wood.

Low fence

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## **PRODUCT MATRIX** WOOD AND STEEL ECOFENCING



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**TREVI** fence Interlocking horizontal rails, no need for screws or glue, just embedded in solid concrete. Available as a round solid wood post (see ROMA model)







**BRUXELLES** fence Needs sleeper-screwing special Anti-parking post to be embedded in concrete.







**FLORENCE** fence Interlocking with U-shaped steel post to be embedded in concrete. Available with solid wood post (see ROMA model)



**TOULOUSE** fence C100 to be knocked in - triple rail and wood cladding. Fixed by carriage bolt Height 1.10 m or 1.40 m









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PREMIUM

## PRODUCT MATRIX WOOD AND STEEL FENCING WITH C100 STEEL POST

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**High fence** 



Low fence

ARCACHON fence C100 single-rail post to knock in with 2.50 m centre-tocentre distance. Fixed by carriage bolt and sleeperscrews - Height **700 mm** 







AMSTERDAM fence C100 post to knock in or on a base plate - single rail with 2, 2.50, 3 or 4 m centre-to-centre spacing. Fixed by carriage bolt and sleeper-screws - Height **700** 





DEAUVILLE fence C100 post to knock in or on a plate - single-rail with 2, 3 or 4 m centre-to-centre spacing. Fixed by carriage bolt -Height **875 mm** 







CADIZ fence C100 post to knock in double staggered rails. Fixed by TRCC - Height 1.20 m







# Solonature CONTENTS

- **O** Swing gate barriers
- 02 Height restriction gantries
- 03 Bollards
- 04 Fences
- 05 Wheel stops and cycle hoops
- 06 Retaining walls
- 07 Autoclaved logs and sawn timber
- 08 Bespoke projects



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SUP TO THE STORE

## ACCESS CONTROL BARRIERS



#### WHY INSTALL ACCESS CONTROL BARRIERS?

Cycle lanes are lanes reserved exclusively for non-motorised two or three-wheeled cycles. Traffic, parking and deliveries by other vehicles are therefore prohibited on cycle lanes.

Whatever the nature of the zone in question - 30 km/h zone, cycle and car-free zone, pedestrian area - these key elements of mobility must be clearly signposted and access to them controlled.

#### WHAT ARE ACCESS CONTROL BARRIERS USED FOR?

Their main purpose is to help mix traffic and separate or exclude certain vehicles, while allowing (controlled) access to road services for servicing, maintenance or renovation.

#### WHO DOES WHAT?

The use of public road space is typically permitted only with proper authorization. This may involve obtaining a road or parking permit, depending on the nature of the installation and its impact on public access.

Such authorizations are generally issued on a temporary and revocable basis.

The local authority responsible for the public road network has the right to grant or deny permits for the installation of street furniture or similar structures. This ensures that any occupation of public space aligns with community needs and safety regulations.

#### WHY BUILD ROADS FOR ALL USERS?

Street furniture must strike a delicate balance between the level of service and comfort offered to users and the fluidity and safety of pedestrian movement. The contrast can easily be increased by adding a different-coloured element, using paint or a retro-reflector, for example. Contact SOLOSAR for advice on these options, which can be integrated into all solutions in the SOLONATURE® range.



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## ACCESS CONTROL BARRIERS

#### **TECHNICAL ADVICE**

#### SAFETY FIRST AND FOREMOST FOR ACCESS CONTROL BARRIERS?

The components must not have any rough edges or sharp parts. SOLONATURE® horizontal rails are therefore made from logs to ensure safety and do not have any sharp edges or corners, but are rounded or chamfered on the upper part of the barrier in direct contact with users and on the vertical posts.

#### VERTICAL LOAD RESISTANCE OF RAIL AND SUBRAILS

A vertical load simulates one or more people sitting on top of the barrier or using a sub-rail as a step. During the development of its solutions, SOLOSAR regularly carries out crash tests to test the robustness of a component or assembly. Thanks to the duality of wood and steel, SOLONATURE® products are more durable, resistant and less susceptible to vandalism.







# ACCESS CONTROL BARRIERS

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#### **TECHNICAL INFO**

- Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- Post: pre-assembled wood and steel (UPN100 with Ø160 trim) Hinges with grease nipple
- Passage width: 2 m or 3 m (width) x 1 m (height)
- With solid wood post in closed position
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, reducing speed for cyclists, etc.
- Specify opening direction (right or left) when ordering
- ✓ Made-to-measure: please contact us

#### EXCLUSIVE PRODUCT BENEFITS:

- Wood and steel: robust, attractive and durable
- Reduced vandalism, controlled maintenance budget and total security
- Installation: post to be embedded in concrete block
- Rail and stiffener: total control of verticality
- Locking (closed position): by steel pin to be inserted into the horizontal rail and the wooden post. Fireman's padlock + key optional.
- Made in France (Moselle)
- Available in double leaf swing



quarantee



Wood and steel single-leaf gate







 OPTION 1: solid wood receiver post assembly for holding in the open position

> Solid wood counter catch post 1500 mm long - diam. 140 mm with hole for pin and optional padlock to lock in open position.

> > Solid wood post, length 1350 mm - diam. 140mm

✓ OPTION 2: fireman's padlock + hydrant key, red epoxy paint, for locking your barriers and gates.

- 14 mm internal cross-section.
- Inside material of the triangle: brass
- Key supplied
- Can be quickly unlocked by firefighters thanks to its triangular lock (firefighters have this type of key).

10 years

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- ✓ OPTION 3: Intelligent padlocks and keys for one-stop access management
- ✓ Intelligent ASSA ABLOY **electromechanical** padlock.
- ✓ 2 key variants: electromechanical <u>or</u> purely mechanical
- The lock is operated from the outside by a CLIQ electronic key programmed by SOLOSAR.
- ✓ The key can only be removed in the locked position
- Designed to last and resist physical and electronic attack
- CLIQ is an electronic locking system designed to provide maximum flexibility and enhanced security. Physical security is optimised by a series of tamper-proof electromechanical cylinders and padlocks, controlled by intelligent CLIQ programmable keys.
- ✓ Material: stainless steel, corrosion-resistant even in harsh environments.
- ✓ OPTION 4: Pre-galvanised steel strip with ULTRAGUARD™ high-reflective coating
- Pre-galvanised steel strip
- ✓ Application of ULTRAGUARD™reflective coating
- ✓ Strip ready to be fixed to any SOLONATURE® gate







From road technology

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Wood and steel barrier



Made to measure



More info on → www.solosar.fr/en/solonature

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#### **TECHNICAL INFO**

- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- Central sleeve with locking pin supplied as standard
- Post: pre-assembled wood-steel composite (UPN100 with Ø160 trim) Hinges with grease nipple
- ✓ **Passage width:** 5 m <u>or</u> 6 m (width) x 1 m (height)
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, reducing speed for cyclists, site entrances, etc.
- ✓ Made-to-measure: please contact us

#### EXCLUSIVE PRODUCT BENEFITS:

- ✓ 3-point locking on right and left pivots and central sleeve by pin
- ✓ Wood and steel: robust, attractive and durable
- Reduced vandalism, controlled maintenance budget and total security
- Installation: post to be embedded in concrete block
- Rail and stiffener: total control of verticality
- Locking (closed position): with RAL 7008 powder-coated steel sleeve and steel locking pin (fireman's padlock + key optional)
- ✓ Made in France (Moselle)
- ✓ Available in single leaf





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wood and steel double-leaf barrier





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 OPTION 1: solid wood receiver post assembly for holding in the open position

**Counter catch post** made of solid wood 1500 mm long - diam. 140 mm with hole for pin and optional padlock to lock in open position.



Catch post made of solid wood, length 1350 mm - diam. 140mm ✓ OPTION 2: fireman's padlock + hydrant key, red epoxy paint, for locking your barriers and gates.



- 14 mm internal cross-section.
- Inside material of the triangle: brass
- Key supplied
- Can be quickly unlocked by firefighters thanks to its triangular lock (firefighters have this type of key).



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### ACCESS CONTROL BARRIERS DOUBLE LEAF SWING GATE

- ✓ OPTION 3: Intelligent padlocks and keys for one-stop access management
- ✓ Intelligent ASSA ABLOY **electromechanical** padlock.
- ✓ 2 key variants: electromechanical <u>or</u> purely mechanical
- The lock is operated from the outside by a CLIQ electronic key programmed by SOLOSAR.
- The key can only be removed in the locked position
- Designed to last and resist physical and electronic attack
- CLIQ is an electronic locking system designed to provide maximum flexibility and enhanced security. Physical security is optimised by a series of tamper-proof electromechanical cylinders and padlocks, controlled by intelligent CLIQ programmable keys.
- ✓ Material: stainless steel, corrosion-resistant even in harsh environments.
- ✓ OPTION 4: Pre-galvanised steel strip with ULTRAGUARD™ high-reflective coating
- Pre-galvanised steel strip
- ✓ Application of ULTRAGUARD™reflective coating
- ✓ Strip ready to be fixed to any SOLONATURE® gate







From road technology

### ACCESS CONTROL BARRIERS CHICANE GATE SET



- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- ✓ Post: pre-assembled wood and steel (UPN100 with Ø160 trim)
- Hinges with grease nipple
- Passage width: 2 m (width) x 1 m (height)
- Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles on green lanes, cycle lanes on the approach to a junction and other lanes dedicated to pedestrians, reducing speed for cyclists, etc.

#### EXCLUSIVE PRODUCT BENEFITS:

- Narrowing effect to force users to reduce their speed on multifunctional cycle paths
- ✓ Wood and steel: robust, attractive and durable
- Reduced vandalism, controlled maintenance budget and total security
- ✓ **Installation:** post to be embedded in concrete block
- Rail and stiffener: total control of verticality
- I-point locking (closed position): by steel pin to be inserted in the pivoting post
- ✓ Made in France (Moselle)
- IMPORTANT: the chicane set is sold in 2 pivoting half-barriers as shown in the diagram opposite.







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### ACCESS CONTROL BARRIERS CHICANE GATE SET

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### ACCESS CONTROL BARRIERS CHICANE GATE SET - Working principle

Dedicated layout for cyclists



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### ACCESS CONTROL BARRIERS CHICANE GATE SET SPECIAL FOR NARROW ROADS

#### **TECHNICAL INFO**

- Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- Post: pre-assembled wood and steel (UPN100 with Ø160 trim)
- Hinges with grease nipple
- Passage width: 1.00 m or 1.50 m (width) x 1 m (height)
- Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles on green lanes, cycle lanes on the approach to a junction and other lanes dedicated to pedestrians, reducing speed for cyclists, etc.

#### EXCLUSIVE PRODUCT BENEFITS:

- ✓ Wood and steel: robust, attractive and durable
- Reduced vandalism, controlled maintenance budget and total security
- Installation: post to be embedded in concrete block
- Rail and stiffener: total control of verticality
- Locking (closed position): by steel pin to be inserted in the solid wood post and fireman's padlock + key (see options)
- Made in France (Moselle)
- Available in single leaf



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### ACCESS CONTROL BARRIERS CHICANE GATE SET SPECIAL FOR NARROW ROADS

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## ACCESS CONTROL BARRIERS

### CHICANE GATE SET SPECIAL FOR NARROW ROADS

✓ OPTION 1: solid wood receiver post assembly for holding in the open position ✓ OPTION 2: fireman's padlock + hydrant key, red epoxy paint, for locking your barriers and gates.





- 14 mm internal cross-section.
- Inside material of the triangle: brass
- Key supplied
- Can be quickly unlocked by firefighters thanks to its triangular lock (firefighters have this type of key).

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### ACCESS CONTROL BARRIERS CHICANE GATE SET SPECIAL FOR NARROW ROADS

✓ OPTION 3: Intelligent padlocks and keys for one-stop access management

- ✓ Intelligent ASSA ABLOY **electromechanical** padlock.
- ✓ 2 key variants: electromechanical <u>or</u> purely mechanical
- The lock is operated from the outside by a CLIQ electronic key programmed by SOLOSAR.
- The key can only be removed in the locked position
- Designed to last and resist physical and electronic attack
- CLIQ is an electronic locking system designed to provide maximum flexibility and enhanced security. Physical security is optimised by a series of tamper-proof electromechanical cylinders and padlocks, controlled by intelligent CLIQ programmable keys.
- ✓ Material: stainless steel, corrosion-resistant even in harsh environments.
- ✓ OPTION 4: Pre-galvanised steel strip with ULTRAGUARD™ high-reflective coating
- Pre-galvanised steel strip
- ✓ Application of **ULTRAGUARD™**reflective coating
- $\checkmark~$  Strip ready to be fixed to any SOLONATURE® gate







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### ACCESS CONTROL BARRIERS CHICANE GATE SET



#### TECHNICAL INFORMATION AND INSTALLATION MAIN USE

The main purpose of the chicane set is to warn cyclists that they are approaching a high-risk intersection and to encourage them to slow down before crossing the road. Its use is recommended for all cycle lanes that do not run alongside roads. However, if the aim is to block the way for cars and off-road vehicles, it is advisable to complete the installation with fixed or removable bollards.

#### LOCATION ON THE CYCLE PATH

It is important to leave a clearance of MINIMUM 3 m **before an intersection** to allow cyclists to slow down and get off their bikes. Then place the barriers about 3 m apart, to make it easier for bicycles with children's trailers to pass through, for example. Finally, leave a passage of at least 1m in the cycle lane to create a narrowing effect that forces cyclists to slow down to pass through the chicane.

#### INSTALLATION ON THE ROAD

To prevent cyclists from bypassing the chicane, we recommend installing the units at a maximum distance of 0.5 m from a fence or other barrier. If the fence is too far away or non-existent, we recommend installing fixed or removable bollards.



## ACCESS CONTROL BARRIERS

The SOLONATURE® Chicane Set is THE solution to to make cyclists slow down or to restrict access to authorised vehicles only. Manufactured from solid wooden logs, the horizontal rails have no sharp angles or protrusions for the users.

Chicane barriers - Cycle lane





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### ACCESS CONTROL BARRIERS EDGE REINFORCED BARRIER

#### **TECHNICAL INFO**

- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- ✓ Post: pre-assembled wood and steel (UPN100 with Ø160 trim)
- Hinges with grease nipple
- ✓ Passage width: 3 and 4 m (width) x 1.00 m (height)
- Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, reducing speed for cyclists, etc.

#### EXCLUSIVE PRODUCT BENEFITS:

- ✓ 40x40x5 mm square steel profile integrated along the entire length of the wooden rail for extreme resistance to vandalism
- ✓ Wood and steel: robust, attractive and durable
- Less vandalism thanks to the anti-lift tab
- $\checkmark$   $\,$  Controlled maintenance budget and constant safety
- Installation: post to be embedded in concrete block
- Rail and stiffener: total control of verticality
- Locking (closed position): by steel pin to be inserted in the steel and wood post and fireman's padlock + key (see options)
- Made in France (Moselle)







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### ACCESS CONTROL BARRIERS EDGE REINFORCED BARRIER

EDGE barriers





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### ACCESS CONTROL BARRIERS DURANCE MODEL



#### **TECHNICAL INFO**

- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- Post: pre-assembled wood-steel composite (UPN100 with Ø160 trim) Hinges with grease nipple
- Passage width: 3.50 m (width) x 1 m (height)
- ✓ Made-to-measure: please contact us
- With solid wood and wood and metal post Posts in closed position
- ✓ **Typical application:** restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, reducing speed for cyclists, etc.
- ✓ Specify opening direction (right or left) when ordering



#### EXCLUSIVE PRODUCT BENEFITS:

- ✓ 40x40x5 mm square steel profile integrated along the entire length of the wooden rail for extreme resistance to vandalism
- Steel case to conceal the padlock for total security
- Wood and steel: robust, attractive and durable
- Less vandalism thanks to the anti-lift tab
- Controlled maintenance budget and constant safety
- Installation: post to be embedded in concrete block
- Rail and stiffener: total control of verticality
- Locking (closed position): by steel pin to be inserted in the steel and wood counter-bearing and standard padlock + key (see options)
- ✓ Made in France (Moselle)



### ACCESS CONTROL BARRIERS DURANCE MODEL

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#### DURANCE barriers





More info on → www.solosar.fr/en/solonature



# ACCESS CONTROL BARRIERS

DURANCE MODEL - Working Principle



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57

10 years guarantee

### ACCESS CONTROL BARRIERS SOLID WOOD SLIDING ARM



- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- ✓ Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- ✓ Post: pre-assembled post assembly (Lg 1750 mm Ø140)
- ✓ Overall dimensions: 2 m or 3 m (width) x 1 m (height)
- Made-to-measure: please contact us
- ✓ Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, reducing speed for cyclists, etc.

#### **EXCLUSIVE PRODUCT BENEFITS:**

- Easy to install and attractively priced
- Autoclaved solid wood: aesthetics and durability guaranteed for 10 years
- ✓ **Location:** wooden post to be embedded in concrete block
- Autoclaved solid wood horizontal sliding rail
- The optional retaining element makes manual sliding easy, so only 1 person is needed to open the barrier.
- Locking (closed position): by steel pin to be inserted in the Post and fireman's padlock + key (see options)
- ✓ Made in France (Moselle)



**OPTION:** retaining element with premounted receiver post assembly for open position



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# ACCESS CONTROL BARRIERS

### **REINFORCED SLIDING ARM**

#### **TECHNICAL INFO**

- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- Post: pre-assembled wood and steel (UPN100 with Ø160 trim)
- Overall dimensions: 3 m (width) x 1 m (height)
- Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, reducing speed for cyclists, etc.

#### EXCLUSIVE PRODUCT BENEFITS:

- ✓ Wood and steel: robust, attractive and durable
- Benefits: less vandalism, lower maintenance costs and total security
- Installation: post to be embedded in concrete block
- Reinforced sliding horizontal rail in wood and steel
- Locking (closed position): by steel pin to be inserted in the pivoting post and fireman's padlock + key
- ✓ OPTION: solid wood receiver post assembly for holding in open position



 OPTION: retaining element with pre-mounted receiver post assembly for open position



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### ACCESS CONTROL BARRIERS REINFORCED SLIDING ARM

The reinforced sliding model is ideal for sites subject to vandalism.





More info on → www.solosar.fr/en/solonature

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# ACCESS CONTROL BARRIERS

### **REINFORCED SLIDING ARM**

✓ OPTION 1: solid wood receiver post assembly for holding in the open position



✓ OPTION 2: fireman's padlock + hydrant key, red epoxy paint, for locking your barriers and gates.



- 14 mm internal cross-section.
- Inside material of the triangle: brass
- Key supplied
- Can be quickly unlocked by firefighters thanks to its triangular lock (firefighters have this type of key).
- ✓ OPTION 3: Pre-galvanised steel strip with ULTRAGUARD™ high-reflective coating
- ✓ Pre-galvanised steel strip
- ✓ Application of ULTRAGUARD™reflective coating
- ✓ Strip ready to be fixed to any SOLONATURE® gate





From road technology

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# O2 swinging height restriction gantries

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### SWINGING HEIGHT RESTRICTION GANTRIES SINGLE-LEAF WOOD AND STEEL

#### **TECHNICAL INFO**

- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- Post: pre-assembled wood-steel composite steel post complete with Ø160 trim) Hinges with grease nipple
- Passage width: 2 to 3 m (width) x 2.25 m (height)
- Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles in car parks and rest areas or site access.
- ✓ Specify the orientation of the tappet when ordering: **right or left**

#### **EXCLUSIVE PRODUCT BENEFITS:**

- Wood and steel: robust, attractive and durable
- Reduced vandalism, controlled maintenance budget and total security
- Horizontal rail adjustable in length between 2 and 3 m passage width
- Installation: post on base plate to be embedded in concrete (anchors not supplied)
- Rail and stiffener: total control of verticality
- Locking (closed position): by steel pin to be inserted in the pivoting post and fireman's padlock + key
- Made in France (Moselle)

- Used to restrict oversize vehicle traffic (camper vans, caravans, etc.) on private roads, car park entrances, etc.





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### SWINGING HEIGHT RESTRICTION GANTRIES SINGLE-LEAF WOOD AND STEEL

Single-leaf height restriction gantries





More info on → www.solosar.fr/en/solonature

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### SWINGING HEIGHT RESTRICTION GANTRIES WOOD AND STEEL DOUBLE LEAF

#### **TECHNICAL INFO**

- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- Post: pre-assembled wood-steel composite steel post complete with Ø160 trim) - Hinges with grease nipple
- Passage width: 5 to 6 m (width) x 2.25 m (height)
- ✓ Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles in car parks and rest areas or site access.

#### EXCLUSIVE PRODUCT BENEFITS:

- ✓ Wood and steel: robust, attractive and durable
- Reduced vandalism, controlled maintenance budget and total security
- ✓ Installation: post to be embedded in concrete block
- Rail and stiffener: total control of verticality
- Locking (closed position): by steel pin to be inserted in the pivoting post and fireman's padlock + key
- ✓ Made in France





### SWINGING HEIGHT RESTRICTION GANTRIES WOOD AND STEEL DOUBLE LEAF

Double-leaf swing gantry height restrictors





More info on → www.solosar.fr/en/solonature

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## SWINGING HEIGHT RESTRICTION GANTRIES

### WOOD AND STEEL DOUBLE LEAF

Working principle



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# SWINGING HEIGHT RESTRICTION GANTRIES

### WOOD AND STEEL DOUBLE LEAF

Working principle



Gantries SOLONATURE® are THE solution when it comes to height restricting access to a site.



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### SWINGING HEIGHT RESTRICTION GANTRIES WOOD AND STEEL DOUBLE LEAF

Gantries SOLONATURE® are THE solution when it comes to height restricting access to a site.

Double height restriction gantry - seaside resort





More info on → www.solosar.fr/en/solonature

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# SWINGING HEIGHT RESTRICTION GANTRIES

### WOOD AND STEEL DOUBLE LEAF

SOLONATURE® height restriction gantries are THE solution when it comes to height restricting access to a site.



Aesthetic finish thanks to autoclaved wood elements



Double-leaf swing gantry - details

More info on → www.solosar.fr/en/solonature

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# SWINGING HEIGHT RESTRICTION GANTRIES WOOD AND STEEL DOUBLE LEAF

#### **TECHNICAL INFO**

- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- Post: pre-assembled wood-steel composite steel post complete with Ø160 trim) -Hinges with grease nipple
- ✓ Passage width: 5 to 6 m (width) x 3.85 m (height)
- ✓ Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles in car parks and rest areas or site access.

#### EXCLUSIVE PRODUCT BENEFITS:

- Enables oversize HGVs to be banned from rest areas
- Wood and steel: robust, attractive and durable
- Reduced vandalism, controlled maintenance budget and total security
- Installation: post to be embedded in concrete block
- Rail and stiffener: total control of verticality
- Locking (closed position): by steel pin to be inserted in the pivoting post and fireman's padlock + key
- ✓ Made in France





SWINGING HEIGHT RESTRICTION GANTRIES WOOD AND STEEL DOUBLE LEAF





More info on → www.solosar.fr/en/solonature

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# SWINGING HEIGHT RESTRICTION GANTRIES WOOD AND STEEL DOUBLE LEAF





More info on → www.solosar.fr/en/solonature

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### SWINGING HEIGHT RESTRICTION GANTRIES WOOD AND STEEL DOUBLE LEAF HGV SPECIAL

Special HGV height restrictor base plate



Grip handle with enlarged loop for removal of the pin with rigid gloves by road and motorway operators.



More info on → www.solosar.fr/en/solonature

# SWINGING HEIGHT RESTRICTION GANTRIES



✓ OPTION 1: adjustable steel hanger kit to reduce passage height

✓ OPTION 2: fireman's padlock + hydrant key, red epoxy paint, for locking your barriers and gates.



- 14 mm internal cross-section.
- Inside material of the triangle: brass
- Key supplied
- Can be quickly unlocked by firefighters thanks to its triangular lock (firefighters have this type of key).

Example of use

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### SWINGING HEIGHT RESTRICTION GANTRIES **OPTIONS**

- ✓ OPTION 3: Intelligent padlocks and keys for one-stop access management
- ✓ Intelligent ASSA ABLOY electromechanical padlock.
- ✓ 2 key variants: electromechanical <u>or</u> purely mechanical
- ✓ The lock is operated from the outside by a CLIQ **electronic key** programmed by SOLOSAR.
- ✓ The key can only be removed in the locked position
- Designed to last and resist physical and electronic attack
- CLIQ is an electronic locking system designed to provide maximum flexibility and enhanced security. Physical security is optimised by a series of tamper-proof electromechanical cylinders and padlocks, controlled by intelligent CLIQ programmable keys.
- Material: stainless steel, corrosion-resistant even in harsh environments.  $\checkmark$









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### FIXED ROUND BOLLARDS - ACCESS CONTROL

#### **TECHNICAL INFO**

- ✓ Solid wood log: class 4 autoclaved Scots pine to EN 335, guaranteed 10 years against rot
- reflective sheet: class 2 nailed to the log
- Overall dimensions: diam. 140 mm x 1.50 m (height)
- ✓ 10x45° chamfer
- Made-to-measure: cut to size, different diameters, ... please consult us
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other pedestrian-only routes, isolating obstacles,

#### **EXCLUSIVE PRODUCT BENEFITS:**

- ✓ Solid wood: aesthetics and durability
- Benefits: constant safety reinforced by factory-fitted reflective sheet
- Installation: to be embedded in concrete block
- Installation tip: lay in dry concrete check straightness with a spirit level
- In compliance with the Order of 18 September 2012 relating to technical requirements for the accessibility of roads and public spaces
- SIMILAR PRODUCTS: removable bollards, reinforced bollards





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### BOLLARDS FIXED ROUND BOLLARDS - ACCESS CONTROL

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More info on → www.solosar.fr/en/solonature

82

### BOLLARDS FIXED ROUND BOLLARDS - ACCESS CONTROL

Fixed bollards to be embedded in the ground



Permanent stock



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### BOLLARDS FIXED ROUND BOLLARDS - ACCESS CONTROL

140 mm fixed bollards with vertical glass microbead reflector (optional)







More info on → www.solosar.fr/en/solonature

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### SOLID WOOD SQUARE BOLLARDS - ACCESS CONTROL

#### **TECHNICAL INFO**

- Solid sawn timber: autoclaved Scots pine class 4 solid log to EN 335, guaranteed 10 years against rotting
- Overall dimensions: diam. 140 mm x 140 mm (variable height to order)
- ✓ Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, isolating obstacles, etc.

#### EXCLUSIVE PRODUCT BENEFITS:

- Solid wood: aesthetics and durability
- ✓ Benefits: Constant safety enhanced **by optional retro-reflective reflector**
- Installation: to be embedded in concrete block
- Installation tip: lay in dry concrete check straightness with a spirit level
- In compliance with the Order of 18 September 2012 relating to technical requirements for the accessibility of roads and public spaces
- ✓ SIMILAR PRODUCT: round, removable or reinforced bollards



10 years guarantee

### BOLLARDS SOLID WOOD SQUARE BOLLARDS - ACCESS CONTROL



✓ OPTION: Glass microbead reflectors with high single-sided reflectivity.



More info on → www.solosar.fr/en/solonature

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### **GUTENBERG** FIXED BOLLARDS - ACCESS CONTROL

#### **TECHNICAL INFO**

- ✓ Steel components: S235JR hot-dip galvanised to ISO 1461
- ✓ Solid sawn timber: autoclaved Scots pine class 4 to EN 335, guaranteed not to rot for 10 years
- Overall dimensions: 140 mm x 140 mm x 900 to 2500 mm (height)
- ✓ Made-to-measure: cut to size, different diameters, ... please consult us
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, isolating obstacles, etc

#### **EXCLUSIVE PRODUCT BENEFITS:**

- Solid wood: aesthetics and durability
- Benefits: total safety enhanced by reflective strip (optional)
- ✓ Installation: to be embedded in concrete block
- Installation tip: lay in dry concrete check straightness with a spirit level
- Compliant with the Order of 18 September 2012 relating to technical requirements for the accessibility of roads and public spaces (h=700 mm above ground level)
- ✓ SIMILAR PRODUCTS: round, removable and reinforced bollards

OPTION: wood bollard finish: square or angled

**OPTION:** Glass microbead reflectors with high single-sided reflectivity.





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### BOLLARDS GUTENBERG FIXED BOLLARDS - ACCESS CONTROL

GUTENBERG bollard - Sarreguemines industrial estate





More info on → www.solosar.fr/en/solonature

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### WOOD AND METAL RICANTO FIXED BOLLARDS - WITH CONCEALED METAL C100 FOR EMBEDDING OR ON BASE PLATE

#### **TECHNICAL INFO**

- Reinforced bollard with invisible C100 steel post with class 2 reflective sheet for onsite installation
- ✓ Steel components: S235 JR hot-dip galvanised to ISO 1461
- ✓ Solid wood components: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- Overall dimensions: diam. 160 mm x 700 mm (height)
- Post: to be sunk into the ground OR embedded in a concrete bed
- ✓ Made-to-measure: please contact us
- ✓ Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, isolating obstacles, etc.

#### **EXCLUSIVE PRODUCT BENEFITS:**

- ✓ Solid wood: aesthetics and durability
- Benefits: total safety reinforced by the reflective sheet supplied
- ✓ Installation: to be embedded in concrete or anchored mechanically or chemically (base plate)
- ✓ Installation tip: lay in dry concrete check straightness with a spirit level
- ✓ In compliance with the Order of 18 September 2012 relating to technical requirements for the accessibility of roads and public spaces

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**RICANTO on base** plate post

RICANTO C100 to embed



### WOOD AND METAL **RICANTO** FIXED BOLLARDS - WITH CONCEALED METAL C100 FOR EMBEDDING OR ON BASE PLATE

RICANTO terminal - Corsica coastline



RICANTO terminal - Netherlands



More info on → www.solosar.fr/en/solonature

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### STANDARD REMOVABLE BOLLARD - ACCESS CONTROL

#### **TECHNICAL INFO**

- Removable bollard with class 2 reflective sheet pre-assembled with 2 nails
- Steel components: S235JR hot-dip galvanised to ISO 1461
- Solid wood log: class 4 autoclaved Scots pine to EN 335, guaranteed 10 years against rot
- ✓ With reflective sheet cl. 2 pre-assembled with 2 nails
- Overall dimensions: diam. 140 mm x 1400 mm (height) (1.10m above ground)
- Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, isolating obstacles, etc.

#### EXCLUSIVE PRODUCT BENEFITS:

- ✓ Solid wood: aesthetics and durability
- ✓ Benefits: constant safety reinforced **by factory-fitted reflective sheet**
- ✓ Installation: to be embedded in concrete block
- In compliance with the Order of 18 September 2012 on technical requirements for the accessibility of roads and public spaces



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### BOLLARDS STANDARD REMOVABLE BOLLARD - ACCESS CONTROL

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Bollard with removable base



More info on → www.solosar.fr/en/solonature

### **PREMIUM** REMOVABLE TERMINAL - ACCESS CONTROL

#### **TECHNICAL INFO**

- ✓ Steel components: S235JR hot-dip galvanised to ISO 1461
- Solid wood log: class 4 autoclaved Scots pine to EN 335, guaranteed 10 years against rot
- 2 factory-fitted stainless steel grab handles
- ✓ 2 factory-fitted 180x40 reflectors with highly reflective glass beads
- ✓ Overall dimensions: diam. 140 mm x 1500 mm (height) (1.30m above ground)
- Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, isolating obstacles, etc.

#### EXCLUSIVE PRODUCT BENEFITS:

- ✓ Solid wood: aesthetics and durability
- ✓ Benefits: Total safety reinforced **by factory-fitted two-sided reflective reflector**
- Installation: to be embedded in concrete block
- In compliance with the Order of 18 September 2012 relating to technical requirements for the accessibility of roads and public spaces





### BOLLARDS **PREMIUM** REMOVABLE TERMINAL - ACCESS CONTROL











### LOCKING OPTIONS FOR SOLONATURE® BOLLARDS

✓ OPTION 1: fireman's padlock + hydrant key, red epoxy paint, for locking your barriers and gates.



- 14 mm internal cross-section.
- Inside material of the triangle: brass
- Key supplied
- Can be quickly unlocked by firefighters thanks to its triangular lock (firefighters have this type of key).

- ✓ OPTION 2 intelligent padlocks and keys for unique access management
  - Intelligent ASSA ABLOY electromechanical padlock.
  - 2 key variants: electromechanical <u>or</u> purely mechanical
  - The lock is operated from the outside by a CLIQ **electronic key** programmed by SOLOSAR.
  - The key can only be removed in the locked position
  - Designed to last and resist physical and electronic attack
  - CLIQ is an **electronic locking** system designed to provide **maximum flexibility and enhanced security**. Physical security is optimised by a series of tamper-proof electromechanical cylinders and padlocks, controlled by intelligent CLIQ programmable keys.
  - Material: stainless steel, corrosion-resistant even in harsh environments.



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### HIGH INTERLOCKING FENCES ROMA SINGLE RAIL

#### **TECHNICAL INFO**

- Solid wood components: Class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- Height above ground: 1100mm
- ✓ Posts: Ø140 mm log, length 1500 mm, for embedding
- Post centre-to-centre distance: 2m
- Diameter of horizontal rail: 80mm
- ✓ Supplied as a ready-to-install kit.
- Made-to-measure: please contact us
- Classic, economical fencing for natural sites

#### ADVANTAGES AND BENEFITS:

- Made from quality Scots pine
- 10-year guarantee against premature rotting
- $\checkmark$  Modular design thanks to double posts for curves.
- Installation without screws or glue
- Economic





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10 years guarantee

### HIGH INTERLOCKING FENCES ROMA SINGLE RAIL

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More info on → www.solosar.fr/en/solonature

### HIGH INTERLOCKING FENCES ROMA DOUBLE RAIL

#### **TECHNICAL INFO**

- Solid wood components: Class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- Height above ground, top rail: 1100mm
- ✓ Posts: Ø140 mm log, length 1500 mm, for embedding
- Post centre-to-centre distance: 2m
- ✓ Diameter of horizontal rail: 80mm
- ✓ Supplied as a ready-to-install kit.
- Made-to-measure: please contact us
- Classic, economical fencing for natural sites

#### ADVANTAGES AND BENEFITS:

- Made from quality Scots pine
- ✓ 10-year guarantee against premature rotting
- Modular design thanks to double posts for curves.
- ✓ Installation without screws or glue
- ✓ Economic



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### HIGH INTERLOCKING FENCES ROMA DOUBLE RAIL

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More info on → www.solosar.fr/en/solonature

#### **TECHNICAL INFO**

- ✓ Solid wood components: Class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- Height above ground, top rail: 1100mm
- ✓ Posts: Ø140 mm log, length 1500 mm, for embedding
- Post centre-to-centre distance: 2m
- ✓ Diameter of horizontal rail: 80mm
- ✓ Supplied as a ready-to-install kit.
- Made-to-measure: please contact us
- Classic, economical fencing for natural sites
- Also available with square post: see TREVI model

#### ADVANTAGES AND BENEFITS:

- Made from quality Scots pine
- ✓ 10-year guarantee against premature rotting
- Modular design thanks to double posts for curves.
- ✓ Installation without screws or glue
- Economic



350

350

2



10 years guarantee







More info on → www.solosar.fr/en/solonature

### TREVI - SOLID WOOD SQUARE POST

#### **TECHNICAL INFO**

- ✓ Solid wood components: Class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- Height above ground, top rail: 1100mm
- ✓ Post centre-to-centre: square 140x140 mm, length 1500 mm, for embedding
- Post: 2m
- ✓ Diameter of horizontal rail: 80mm
- Delivered ready to install.
- Made-to-measure: please contact us
- Classic, cost-effective fencing for natural sites with or without slopes
- Round post version available: see ROMA model

#### ADVANTAGES AND BENEFITS:

- Made from quality Scots pine
- 10-year guarantee against premature rotting
- Modular design thanks to double posts for curves.
- Installation without screws or glue
- Economic



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10 years guarantee

### HIGH INTERLOCKING FENCES TREVI - SOLID WOOD SQUARE POST



TREVI square posts in autoclaved solid wood



More info on → www.solosar.fr/en/solonature

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#### **TECHNICAL INFO**

- ✓ Solid wood components: Class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- ✓ Factory pre-assembled, ready-to-install railing module
- Height above ground, top rail: 1100mm
- Post centre-to-centre distance: 2m
- ✓ Posts: Ø140 mm log, length 1500 mm, for embedding
- ✓ Made-to-measure: please contact us
- Typical application: property boundary with railing function (non-standardised)

#### ADVANTAGES AND BENEFITS:

- Made from quality Scots pine
- 10-year guarantee against premature rotting
- Modular design thanks to double posts for curves.
- Installation without screws or glue
- Economic

We pre-assemble the railing module so that you don't waste any time on your site.





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MILANO fence with reinforced steel post



### **TECHNICAL INFO**

- Solid wood components: Class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- Height above ground, top rail: 1100mm
- ✓ Posts: Ø140 mm log, length 1500 mm, for embedding
- Post centre-to-centre distance: 2m
- Diameter of horizontal rail: 80mm
- ✓ Bar diameter: 60mm
- SOLOSAR pre-assembles the bars
- ✓ Made-to-measure: please contact us

### ADVANTAGES AND BENEFITS:

- Made from quality Scots pine
- 10-year guarantee against premature rotting
- Modular design thanks to double posts for curves.
- Installation without screws or glue
- Economic



We pre-assemble the railing module so that you don't waste any time on your site.



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TORINO fencing with steel anchors to ensure rigidity and easy removal of wooden posts. See all our anchoring solutions in the ANCHORAGES section.





More info on → www.solosar.fr/en/solonature

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## LOW FENCES WITH SLEEPER SCREWS

#### **TECHNICAL INFO**

- ✓ Solid wood components: Class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- Height above ground: 800mm
- Post centre-to-centre distance: 2.8m
- Posts: Ø140 mm log, length 1300 mm, tongue and groove machining, for embedding
- ✓ Made-to-measure: please contact us
- Typical application: limits passage but not visibility

#### ADVANTAGES AND BENEFITS:

- Made from quality Scots pine
- 10-year guarantee against premature rotting
- Total adjustment of post spacing by re-drilling the horizontal rail
- Economical thanks to the 2.80 m centre-to-centre distance



Aesthetic joint between post and rail using "tongue and groove" machining





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## LOW FENCES WITH SLEEPER SCREWS

London fence - detail of tongue and groove machining



London fence - large linear



More info on → www.solosar.fr/en/solonature

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## LOW FENCES WITH SLEEPER SCREWS

## LONDON

Working principle



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## ANTI-PARKING FENCES

### BRUXELLES

### **TECHNICAL INFO**

- ✓ Solid wood components: Class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- Height above ground: 700mm
- Post centre-to-centre distance: 1.8m
- ✓ Posts: Ø100 mm log, length 1000 mm, tongue and groove machining, for embedding
- Overall length: 2m
- ✓ Made-to-measure: please contact us
- Typical application: limits passage but not visibility

### ADVANTAGES AND BENEFITS:

- Made from autoclaved solid Scots pine
- Total adjustment of post spacing by re-drilling the horizontal rail
- ✓ Post





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### ANTI-PARKING FENCES BRUXELLES

Made-to-measure on a Bruxelles base





More info on → www.solosar.fr/en/solonature

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## HIGH WOOD AND METAL FENCES

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### FLORENCE DOUBLE RAIL

#### **TECHNICAL INFO**

- ✓ Steel components: S235JR hot-dip galvanised to ISO 1461
- Solid wood logs: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rot
- Height above ground, top rail: 1100mm
- Posts: Ø160 mm log, to be fixed on a C100 Post, to be embedded in the ground
- Post centre-to-centre distance: 2m
- Diameter of horizontal rail: 100mm
- ✓ Supplied as a ready-to-install kit.
- Made-to-measure: please contact us
- ✓ Classic, economical fencing for natural sites

### ADVANTAGES AND BENEFITS:

- wood and steel: ensures robustness by adding components at stress and connection points, aesthetics and durability
- $\checkmark$  Reduced vandalism, controlled maintenance budget and total security
- Installation: post to be embedded in concrete block
- Made in France
- Similar products: model ROMA



C100 post to embed

10 years guarantee

## HIGH WOOD AND METAL INTERLOCKING FENCES

### FLORENCE



Made-to-measure on a FLORENCE base



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## WOOD AND METAL HIGH FENCES

### TOULOUSE

#### **TECHNICAL INFO**

- ✓ Steel components: S235JR hot-dip galvanised to ISO 1461
- ✓ Solid wood logs: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rot
- Height above ground: 1400mm
- ✓ Posts: Ø160 mm log, to be fixed on a C100 Post, to be embedded in the ground
- Post centre-to-centre distance: 2m
- ✓ Diameter of horizontal rail: 140mm
- Supplied as a ready-to-install kit.
- Made-to-measure: please contact us
- ✓ High fencing to ensure safety for all users (pedestrians, cyclists, horse riders)

### ADVANTAGES AND BENEFITS:

- ✓ The highest fence in the SOLONATURE® range
- Fall protection railing effect
- ✓ Suitable for all road users: cyclists, pedestrians and horse riders
- wood and steel: ensures robustness by adding components at stress and connection points, aesthetics and durability
- $\checkmark$  Reduced vandalism, controlled maintenance budget and total security
- Installation: post to be embedded in concrete block
- Made in France





## WOOD AND METAL FENCES METAL POST - WOOD CLADDING

### AMSTERDAM

### **TECHNICAL INFO**

- ✓ Steel components: S235JR hot-dip galvanised to ISO 1461
- Solid wood logs ø160mm: class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- Post: C100 galvanised steel thickness 5 mm to be sunk or embedded in the ground OR on a plate to be spiked into the asphalt or concrete slab
- Solid wood ø160mm post cladding: steel front panel concealed by machined wooden log
- 4 models: post spacing 2, 2.50 and 3 m and 4 m
- ✓ Height above ground: 700m

### ADVANTAGES AND BENEFITS:

- ✓ The best-seller of all SOLONATURE® fences
- ✓ Wood and steel: ensures robustness by adding components at stress and connection points, aesthetics and durability
- ✓ Suitable for **all types of site**, knock-in version with variable centre-to-centre distances
- Reduced vandalism, controlled maintenance budget and total security
- Installation: post to be embedded in concrete block
- The distance between the posts can be adjusted by re-drilling the top rail
- Made in France
- Similar products: DEAUVILLE, DINARD or AMSTERDAM models





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### WOOD AND METAL FENCES METAL POST - WOOD CLADDING

### AMSTERDAM



Amsterdam barriers - Car parks and cycle paths



## WOOD AND METAL FENCES METAL POST - WOOD CLADDING

AMSTERDAM

Working principle







125

10 years guarantee

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## WOOD AND METAL FENCES METAL POST - WOOD CLADDING

### ARCACHON

### **TECHNICAL INFO**

- ✓ Steel components: S235JR hot-dip galvanised to ISO 1461
- ✓ Solid wood logs ø160mm: class 4 autoclaved Scots pine to EN 335, guaranteed 10 years against rotting
- Post: C100 galvanised steel thickness 5 mm to be sunk or embedded in the ground or on a plate to be spiked into the asphalt or concrete slab (optional)
- ✓ Ø160mm post cladding: steel masking on front using machined wooden logs
- ✓ 3 models: post spacing 2, 2.50 and 3 m
- ✓ Height above ground: 700mm
- Flat steel splice for durable connection of components

### ADVANTAGES AND BENEFITS:

- Solid wood: aesthetics and durability
- ✓ Benefits: constant safety reinforced by factory-fitted reflective sheet
- Installation: to be embedded in concrete block
- Installation tip: lay in dry concrete check straightness with a spirit level
- ✓ Similar products: DEAUVILLE, DINARD or AMSTERDAM models





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## WOOD AND METAL FENCES METAL POST - WOOD CLADDING

### ARCACHON





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## WOOD AND METAL FENCES METAL POST - WOOD SOLDER CLADDING

**ARCACHON** Treatment of ends

> End of line Straight - solid wood round end









## HIGH WOOD AND STEEL FENCES

#### **TECHNICAL INFO**

- ✓ Steel components: S235JR hot-dip galvanised to ISO 1461
- Solid wood logs: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rot
- ✓ Top rail: ø 120 mm
- ✓ Intermediate rail: ½ log ø 120 mm
- Dimensions above ground: 1200mm
- Post centre-to-centre distance: 2.50m
- ✓ Posts: C100 knock-in galvanised steel or C100 on base plate
- Made-to-measure: please contact us
- Typical application: restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, isolating obstacles, etc.

#### ADVANTAGES AND BENEFITS:

- ✓ Wood and steel: robust, attractive and durable
- Suitable for all types of site, with knock-in or base-mounted versions and variable centre-to-centre distances
- Reduced vandalism, controlled maintenance budget and total security
- Installation: post to be embedded in concrete block
- ✓ The distance between the posts can be adjusted by re-drilling the top rail
- Made in France





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### HIGH WOOD AND STEEL FENCES CADIZ

CADIZ model - Luxembourg





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### HIGH WOOD AND STEEL FENCES CADIZ

✓ OPTION 1: Powder coating of posts. All RAL colours



✓ OPTION 2: Plunging end terminal module





#### **TECHNICAL INFO**

- ✓ Steel components: S235JR hot-dip galvanised to ISO 1461
- ✓ Solid wood logs ø160mm: class 4 autoclaved Scots pine to EN 335, guaranteed 10 years against rotting
- ✓ Available centre-to-centre distance: 2 m, 3 m or 4 m
- Height: 875mm
- ✓ Optional: C100 steel Post on base plate
- ✓ Made-to-measure: please contact us
- ✓ **Typical application:** restricting access to motorised vehicles on greenways, cycle paths and other routes dedicated to pedestrians, isolating obstacles, etc.

#### ADVANTAGES AND BENEFITS:

- ✓ Wood and steel: robust, attractive and durable
- Suitable for all types of site, with knock-in or base-mounted versions and variable centre-to-centre distances
- Reduced vandalism, controlled maintenance budget and total security
- Installation: post to be embedded in concrete block
- The distance between the posts can be adjusted by re-drilling the top rail
- Made in France





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### Lowered end - requires an end plate (photo 1) Addition of a 600 mm long sleeve (photo 2)

> Reduction in the centre-to-centre distance between end posts. Requires drilling the wooden rail. (photo 3)

WOOD AND STEEL FENCES



Photo 1

DEAUVILLE

Treatment of ends

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 $\triangleright$ 

The ends can be produced using a variety of processes:

Photo 2

Photo 3



134

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### Treatment of ends

✓ OPTION 1: 2-Metre plunging end of line







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### Treatment of ends

✓ OPTION 2: straight thread end - autoclaved solid log end







DEAUVILLE fence in single units - Car park







More info on → www.solosar.fr/en/solonature

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### WOOD AND STEEL FENCES DINARD

#### **TECHNICAL INFO**

- ✓ Steel components: S235JR hot-dip galvanised to ISO 1461
- Solid wood logs: class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- Rail diameter: 140mm
- Size above ground: 855mm
- Post centre-to-centre distance: 2.5m
- Posts: C100 knock-in galvanised steel or on base plate + Ø 160 mm wooden cladding
- ✓ Made-to-measure: please contact us
- Typical application: provides aesthetic access control while restricting passage, but not visibility.

#### ADVANTAGES AND BENEFITS:

- ✓ Wood and steel: robust, attractive and durable
- Suitable for all types of site, with knock-in or base-mounted versions and variable centre-to-centre distances
- Reduced vandalism, controlled maintenance budget and total security
- ✓ Installation: post to be embedded in concrete block
- Post spacing can be fully adjusted by re-drilling the top rail
- Made in France





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### WOOD AND STEEL FENCES DINARD

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# 05 ANCHORING OF WOODEN POSTS

## ANCHORING WOOD POSTS

The choice of fixing system depends not only on the nature of the product but also on the structure and texture of the soil.



Powder-coated sleeve RAL 7008

#### Solonature Solosare Correctioner - Manual Market Pour nous, votre projet est unique

#### STEEL SHEATH

Steel: S235JR hot-dip galvanised to ISO 1461

Available in a **galvanised finish** <u>or</u> **powder-coated** to RAL 7008 allows the product to be replaced in the event of vandalism or for seasonal installations. Ideal for **flat, hard floors.** 


## ANCHORING WOOD POSTS

The choice of fixing system depends not only on the nature of the product but also on the structure and texture of the soil.



Example of hot-dip galvanised anchoring



#### STEEL ANCHOR ON PLATE

**Steel:** S235JR hot-dip galvanised to ISO 1461 Available in **galvanised** <u>or</u> **powder-coated** RAL 7008 finish.

Steel anchors can also be used to replace the product in the event of vandalism. Ideal for **loose floors**.

Prevents the Post from rotating.



#### 

## ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE

#### The 1<sup>st</sup> concrete-free ground fixing solution (SOLONATURE® bollard posts and fences)

The issue of "carbon footprint" is more important than ever today.

That's why we are offering WOOD by Ferradix®: the first floor fixing without concrete **without concrete** for our wooden posts, bollards and fences **SOLONATURE**® in a sustainable and environmentally friendly way.

WOOD post with 4 screws for wood inserts





## ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE

The 1st concrete-free ground fixing solution (SOLONATURE® bollard posts and fences)



**SOLONATURE®** fixed bollard with ALPHA anchoring piles for loose ground and WOOD post screwed into the log.



Adjustable height above ground (minimum 5 cm) to prevent the wood section from coming into contact with ground humidity.

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## ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE

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Examples of projects



Adjustable height above ground (minimum 5 cm) to prevent the wood section from coming into contact with ground humidity.



## ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE - WOOD POST

Concrete production currently accounts for over 8% of man-made CO<sup>2</sup> emissions, more than global air traffic. By using our anchor piles without concrete, you can save up to 190 kg of concrete per pile.

The WOOD post is fixed into the wooden posts or logs and then inserted into the CITY or ALPHA anchoring piles. It allows logs to be screwed together and protects them from damp. Made entirely of hot-dip galvanised steel.

**Torx star screws** are automatically angled when screwed in for perfect anchoring of the wood part.

**Plate** designed to optimise wood ventilation (Venturi effect due to the narrowing of the air circulation zone)

**Biconical steel sealing ring** diam. 60 + 4 screws for joining the WOOD post to the anchoring post. The patented doubleconical steel ring exerts an exceptional holding force, preventing the wood post from rotating or pulling vertically.

Tube diam. 60mm Length 350 mm for CITY piles (see next page) or 400 or 600 mm for ALPHA piles (see next page)

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## ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE - ANCHORING PILES



ALPHA anchoring piles without concrete.

For **loose**, natural and asphalt floors

Hot-dip galvanised steel components

- ALPHA drive-in anchor piles for natural and asphalt soils → length 40 cm or 60 cm (depending on loose soil) and diam. 60mm
- CITY drive-in anchor piles for hard concrete and paving slabs  $\rightarrow$  length 30 cm and diam. 60mm



**CITY** anchoring piles Addition of 20% of concrete

For **hard** floors, concrete and paved



TITI		
ALPHA for diam. 60 Length <b>600 mm</b>	ALPHA for diam. 60 Length <b>400 mm</b>	CITY for diam. 60 Length <b>300 mm</b>
For very loose, uncompacted natural soil	For compacted natural soil	

## ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE - CITY ANCHORING PILES

The 1st concrete-free ground fixing solution (SOLONATURE® bollard posts and fences)

Saving on concrete is so easy:

- 1. Decore
- 2. Drive in city anchor pile and light addition of concrete
- 3. Insert the WOOD post and tighten the biconical ring
- 4. Done!







CITY anchoring piles Addition of 20% of concrete

For **hard** floors, concrete and paving only 30 cm long - ideal for urban environments

**Biconical steel sealing ring** diam. 60 + 4 screws for joining the WOOD post to the anchoring post. The patented double-conical steel ring exerts an exceptional holding force, preventing the wood post from rotating or pulling vertically.





## ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE - ALPHA ANCHORING PILES

The 1st concrete-free ground fixing solution (SOLONATURE® bollard posts and fences)

100% concrete-free installation:

- 1. Drive in the ALPHA anchor pile
- 2. Insert the WOOD post and tighten the biconical ring
- 3. Done!



ALPHA for diam. 60

For compacted natural soil

Length **400 mm** 



Length **600 mm** For very loose, uncompacted natural soil



**Biconical steel sealing ring** diam. 60 + 4 screws for joining the WOOD post to the anchoring post. The patented double-conical steel ring exerts an exceptional holding force, preventing the wood post from rotating or pulling vertically.

#### ALPHA anchoring piles

without concrete for **loose**, natural and asphalt floors



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# ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE

#### INSTALLATION METHOD





**Stage 1:** demarcation of the insertion area by impression or decoring



**Stage 2:** drive down the hole in the ground - check axial alignment



**Stage 3:** drive in the anchor piles using a pneumatic hammer and dedicated installation tool.





**Step 4:** Insert the anchor piles into the ground







Biconical ring

## 06 WHEELS STOPS AND BICYCLE LOOPS

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NON-INTRUSIVE PHYSICAL WARNING FOR PARKING SPACES

#### WHEEL STOP

#### **TECHNICAL INFO**

- Solid wood components: Class 4 autoclaved Scots pine to EN 335, guaranteed not to rot for 10 years
- ✓ Overall dimensions: 2m x 1/2 Ø160mm, 3 countersunk holes
- Anchoring: chemical or mechanical (not supplied)
- Typical application: The economical solution for marking out parking spaces

#### ✓ OPTIONS:

- Mechanical anchoring: hard ground and sound concrete
- Chemical anchoring: if concrete, weathered or loose soil





(100 % 1945 (100 % 1945 (100 % 1945)



10 years guarantee

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## NON-INTRUSIVE PHYSICAL WARNING FOR PARKING SPACES

WHEEL STOP





More info on → www.solosar.fr/en/solonature

### **TECHNICAL INFORMATION - ANCHORING** WHEEL STOP

✓ OPTION 1: ready-to-install chemical anchoring kit for asphalt

- > 1 cartridge of chemical anchorant. With mixer 300 ml. Universal anchorant for asphalt (asphalt). Gun not supplied. For +/- 60 anchors.
- > 3 hex M12x80 galvanised screws
- ➢ 3 M 12 Washers
- > 3 ATP zinc-plated steel female plugs for anchoring 12 mm thread - length: 120 mm - drill diam. 18 mm x 125 mm deep.

- ✓ OPTION 2: ready-to-install standard chemical anchoring kit for hard floors
  - > 1 cartridge of chemical anchorant. With mixer 300 ml. Universal sealer for concrete or non-cracked hard ground. Gun not supplied. For +/- 60 anchors.
  - > 3 zinc-plated M12x130 anchoring rods
  - > 3 Washers + 3 M12 nuts

thread and provide a flush finish.









Special cap to prevent resin intrusion into the

## HOOP FOR ALL BICYCLES WOOD AND METAL

#### **2-SPACE BICYCLE HOOP**

#### **TECHNICAL INFO**

- ✓ Curved hoop made of hot-dip galvanised S235 JR steel to ISO 1461
- ✓ Solid wood log: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rotting
- ✓ **Dimensions:** 900mm (height) x 840 mm (width)
- Post: to be embedded in the ground in a concrete bed
- Option: sleeve to be embedded in the ground
- ✓ Made-to-measure: please contact us

#### **BENEFITS AND ADVANTAGES**

- Solid wood: aesthetics and durability
- ✓ Benefits: vandal-resistant steel
- Installation: to be embedded in concrete block
- Installation tip: lay in dry concrete check straightness with a spirit level



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10 years guarantee

### HOOP FOR ALL BICYCLES WOOD AND METAL

#### 2-SPACE BICYCLE HOOP





More info on → www.solosar.fr/en/solonature

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### READY-TO-INSTALL KIT RETAINING WALL RETAINING WALL

#### **TECHNICAL INFO**

- Solid wood logs: class 4 autoclaved Scots pine to EN 335, guaranteed for 10 years against rot
- Contact us to discuss the technical details of your project with our design office.

#### **BENEFITS AND ADVANTAGES**

- ✓ Made from quality Scots pine
- 10-year guarantee against premature rotting
- Modular design by varying the centre-to-centre distance
- Installation without screws or glue
- Post to be embedded in concret^
- Economical and sustainable





Class 4 WF EVOS HUMBER 10 years guarantee

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### READY-TO-INSTALL KIT RETAINING WALL RETAINING WALL







More info on → www.solosar.fr/en/solonature

## READY-TO-INSTALL KIT RETAINING WALL

#### **RETAINING WALL**



Please contact us to discuss your project before we give you an estimate.

#### Data to be sent to us:

- ✓ Total length required
- ✓ Number of 90° angles
- ✓ Desired height above ground
- ✓ Special features of the site

#### Installation instructions:

- ✓ Create fairly deep beds 40 (L)x40 (W) x50 (D)
- ✓ Pour concrete and embed the protected posts in the concrete (not too liquid)
- Leave to dry for at least 1 week (note: in very hot weather, it is not ideal to create concrete beds)
- ✓ Install the wooden boards (without glue or screws)
- ✓ Position a waterproof membrane behind the finished wall from the base to the top of the wall
- ✓ Cover with topsoil. This will fill with soil up to 20 cm from the top of the retaining wall.
- ✓ Do not plant invasive species in the immediate vicinity (bamboo, etc.)



A retaining wall is a vertical wall used to contain earth or fill in a small area.

It can also be used to protect roads and paths from landslides, structure a natural bank or limit erosion by run-off.



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#### **TECHNICAL INFO**

- ✓ Autoclaved Scots pine class 4 to EN 335 with 10-year guarantee against rotting
- ✓ Boards and logs from the Black Forest
- ✓ Custom cut-outs and dimensions: please contact us
- ✓ Dimensions: see following pages





More info on → www.solosar.fr/en/solonature

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9627250	Planed sawn timber 4 chamfers 2.0 x 9.5 x L=2500 cm
9627300	Planed sawn timber 4 chamfers 2.0 x 9.5 x L=300 cm
9627400	Planed sawn timber 4 chamfers 2.0 x 9.5 x L=400 cm
9639250	Planed sawn timber 4 chamfers 2.0 x 14.5 x L=250 cm
9639300	Planed sawn timber 4 chamfers 2.0 x 14.5 x L=300 cm
9639400	Planed sawn timber 4 chamfers 2.0 x 14.5 x L=400 cm
9685250	Planed sawn timber 4 chamfers 2.6 x 9.5 x L=250 cm
9685300	Planed sawn timber 4 chamfers 2.6 x 9.5 x L=300 cm
9685400	Planed sawn timber 4 chamfers 2.6 x 9.5 x L=400 cm
9691250	Planed sawn timber 4 chamfers 2.6 x 14.5 x L=250 cm
9691300	Planed sawn timber 4 chamfers 2.6 x 14.5 x L=300 cm
9691400	Planed sawn timber 4 chamfers 2.6 x 14.5 x L=400 cm
9695300	Planed sawn timber 4 chamfers 2.6 x 19.5 x L=300 cm
9695400	Planed sawn timber 4 chamfers 2.6 x 19.5 x L=400 cm
9722300	Planed sawn timber 4 chamfers 3.4 x 7.0 x L=300 cm
9722400	Planed sawn timber 4 chamfers 3.4 x 7.0 x L=400 cm
9724300	Planed sawn timber 4 chamfers 3.4 x 14.5 x L=300 cm
9724400	Planed sawn timber 4 chamfers 3.4 x 14.5 x L=400 cm

Autoclaved Scots pine cl. 4 - planed and chamfered boards

Dimensions are expressed in thickness x width x length

9745300	Planed sawn timber 4 chamfers 3.4 x 19.5 x L=300 cm	
9745400	Planed sawn timber 4 chamfers 3.4 x 19.5 x L=400 cm	
9781300	Planed sawn timber 4 chamfers 4.5 x 9.0 x L=300 cm	
9781400	Planed sawn timber 4 chamfers 4.5 x 9.0 x L=400 cm	
9791300	Planed sawn timber 4 chamfers 4.5 x 14.5 x L=300 cm	
97911400	Planed sawn timber 4 chamfers 4.5 x14.5 x L=400cm	
9842300	Planed sawn timber 4 chamfers 7.0 x 7.0 x L=300 cm	
9842400	Planed sawn timber 4 chamfers 7.0 x 7.0 x L=400cm	
9886300	Planed sawn timber 4 chamfers 9.0 x 9.0 x L=300 cm	
9886400	Planed sawn timber 4 chamfers 9.0 x 9.0 x L=400cm	
9817300	Planed sawn timber 4 chamfers 5.8 x 12.0 x L=300 cm	
9817400	Planed sawn timber 4 chamfers 5.8 x 12.0 x L=400 cm	
9923300	Planed sawn timber 4 chamfers 11.5 x 11.5 x L=300 cm	

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166

Scots pine logs - chamfered - autoclaved class 4

1208100	Milled log diam. 8 L=100cm
1208125	Milled log diam. 8 L=125cm
1208150	Milled log diam. 8 L=150cm
1208175	Milled log diam. 8 L=175cm
1208200	Milled log diam. 8 L=200cm
1208250	Milled log diam. 8 L=250cm
1208300	Milled log diam. 8 L=300cm
1208400	Milled log diam. 8 L=400cm
1210050	Milled log diam. 10 L=50cm
1210075	Milled log diam. 10 L=75cm
1210100	Milled log diam. 10 L=100cm
1210125	Milled log diam. 10 L=125cm
1210150	Milled log diam. 10 L=150cm
1210175	Milled log diam. 10 L=175cm
1210200	Milled log diam. 10 L=200cm
1210250	Milled log diam. 10 L=250cm
1210300	Milled log diam. 10 L=300cm
1210400	Milled log diam. 10 L=400cm
1210500	Milled log diam. 10 L=500cm

	1212050	Milled log diam. 12 L=50cm
	1212075	Milled log diam. 12 L=75cm
	1212100	Milled log diam. 12 L=100cm
	1212125	Milled log diam. 12 L=125cm
	1212150	Milled log diam. 12 L=150cm
	1212175	Milled log diam. 12 L=175cm
	1212200	Milled log diam. 12 L=200cm
	1212250	Milled log diam. 12 L=250cm
	1212300	Milled log diam. 12 L=300cm
	1212400	Milled log diam. 12 L=400cm
	1212500	Milled log diam. 12 L=500cm
	1214050	Milled log diam. 14 L=50cm
	1214075	Milled log diam. 14 L=75cm
1	1214100	Milled log diam. 14 L=100cm
1	1214125	Milled log diam. 14 L=125cm
	1214150	Milled log diam. 14 L=150cm
	1214175	Milled log diam. 14 L=175cm
3	1214200	Milled log diam. 14 L=200cm
1	1214250	Milled log diam. 14 L=250cm
Sile and	1214300	Milled log diam. 14 L=300cm
	1214400	Milled log diam. 14 L=400cm
	1214500	Milled log diam. 14 L=500cm

Dimensions are expressed in **diameter x length** 



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Scots pine logs - chamfered - autoclaved class 4

		_
1216050	Milled log diam. 16 L=50cm	
1216075	Milled log diam. 16 L=75cm	
1216100	Milled log diam. 16 L=100cm	
1216125	Milled log diam. 16 L=125cm	
1216150	Milled log diam. 16 L=150cm	-
1216175	Milled log diam. 16 L=175cm	and the
1216200	Milled log diam. 16 L=200cm	1
1216250	Milled log diam. 16 L=250cm	
1216300	Milled log diam. 16 L=300cm	
1216400	Milled log diam. 16 L=400cm	3
1216500	Milled log diam. 16 L=500cm	- 000
1218050	Milled log diam. 18 L=50cm	
1218075	Milled log diam. 18 L=75cm	
1218100	Milled log diam. 18 L=100cm	-
1218125	Milled log diam. 18 L=125cm	

	1218150	Milled log diam. 18 L=150cm
	1218175	Milled log diam. 18 L=175cm
	1218200	Milled log diam. 18 L=200cm
	1218250	Milled log diam. 18 L=250cm
	1218300	Milled log diam. 18 L=300cm
	1218400	Milled log diam. 18 L=400cm
	1218500	Milled log diam. 18 L=500cm
	1220100	Milled log diam. 20 L=100cm
	1220125	Milled log diam. 20 L=125cm
112	1220150	Milled log diam. 20 L=150cm
	1220175	Milled log diam. 20 L=175cm
	1220200	Milled log diam. 20 L=200cm
	1220250	Milled log diam. 20 L=250cm
ちろう	1220300	Milled log diam. 20 L=300cm
in the	1220400	Milled log diam. 20 L=400cm
	1220500	Milled log diam. 20 L=500cm

Dimensions are expressed in **diameter x length** 



#### LOGS AND SAWN TIMBER <sup>1</sup>/<sub>2</sub> LOGS

1/2 Scots pine logs - autoclaved class 4



3308200	1/2 log diam. 8 L=200cm
3308250	1/2 log diam. 8 L=250cm
3308300	1/2 log diam. 8 L=300cm
3308400	1/2 log diam. 8 L=400cm
3310200	1/2 log diam. 10 L=200cm
3310250	1/2 log diam. 10 L=250cm
3310300	1/2 log diam. 10 L=300cm
3310400	1/2 log diam. 10 L=400cm
3310500	1/2 log diam. 10 L=500cm
3312200	1/2 log diam. 12 L=200cm
3312250	1/2 log diam. 12 L=250cm
3312300	1/2 log diam. 12 L=300cm
3312400	1/2 log diam. 12 L=400cm
3312500	1/2 log diam. 12 L=500cm
3314300	1/2 log diam. 14 L=300cm
3314400	1/2 log diam. 14 L=400cm
3314500	1/2 log diam. 14 L=500cm

Dimensions are expressed in **diameter x length** 



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169

## 08 BESPOKE PROJECTS

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Bespoke Amsterdam barriers with motorcycle screen - Ecole de Gendarmerie motorisée de Fontainebleau





More info on → www.solosar.fr/en/solonature

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C100 cycle barrier on customised plate - Strasbourg





More info on → www.solosar.fr/en/solonature

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Height restriction gantry with central locking





More info on → www.solosar.fr/en/solonature

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Special fencing and gates without sharp edges - Primary school





More info on → www.solosar.fr/en/solonature

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Wooden crosspiece for a staircase in a sheltered environment





More info on → www.solosar.fr/en/solonature

## ULTRAGUARD™

Highly reflective coating for vertical metal, concrete or wood surfaces

#### WHAT IS ULTRAGUARD?

- ULTRAGUARD<sup>™</sup> is the combination of a **waterborne paint** and **highly reflective glass microbeads** applied vertically to metal and wood surfaces wood surfaces.
- Technology applied to road safety barriers
- ULTRAGUARD<sup>™</sup> provides a complete, glare-free, three-dimensional, continuous view of the roadway like an Ariadne's thread, guiding road users at night and in bad weather, thus ensuring greater safety.
- ULTRAGUARD<sup>™</sup> can be applied to our custom-made wood or metal components: **please consult us**





