

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



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 CO² 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, wood-based 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 environmentally-friendly 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 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

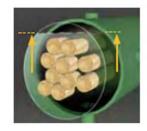
In compliance with the European Environmental Biocide Directive, our wood treatment process does not contain chromium or arsenic and complies with EN 335. Our products are manufactured without glues or solvents.

Protection at its core

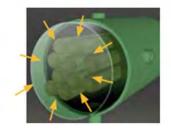
As a living material, wood breathes, shrinks and expands. After treatment, the wood may crack as a natural reaction to the autoclave process. This does not affect the quality or durability of the material, which is protected right to its core. Similarly, UV-sensitive wood may turn grey over time. Again,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



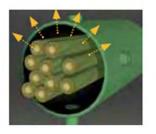
1. Vacuum process



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. 1.

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.

People flow management

Physical and visual protection

Entry restrictions

Road limit marking



ACCESS CONTROL

A MAJOR CHALLENGE TODAY

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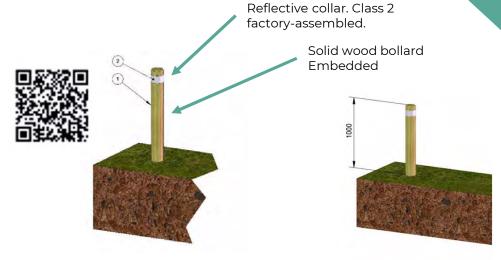


FIXED EMBEDDED BOLLARDS

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

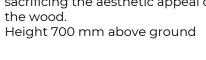




Reflective collar Class 2 unassembled

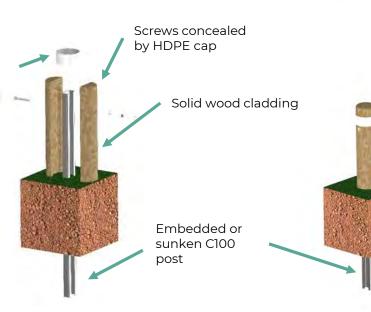
RICANTO bollard

With embedded or sunken steel C100 post into the ground for optimum strength without sacrificing the aesthetic appeal of the wood.









solonature

REMOVABLE BOLLARDS

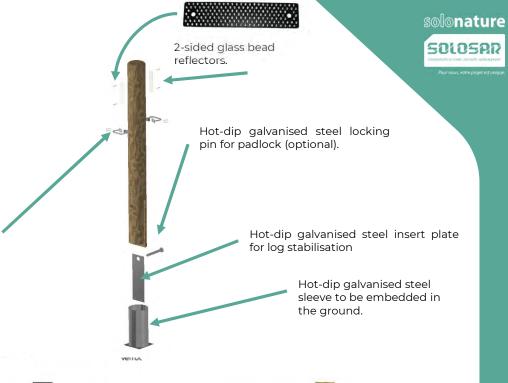
PREMIUM Bollard

Solid wood post ø140 with steel sleeve for embedding in concrete. Stainless steel handle. With 2 glass microbeads reflectors.





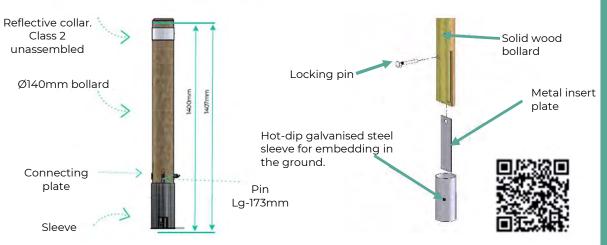
2 stainless steel handles



REMOVABLE bollard

With steel sleeve for embedding into concrete. Completely removable log.





BOLLARDS ON BASE PLATES

Reflective collar Class 2 unassembled



RICANTO bollard on base plate

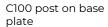
For optimum strength without sacrificing the aesthetic appeal of the wood.

Height 700 mm above ground.





Screws concealed by HDPE plug.

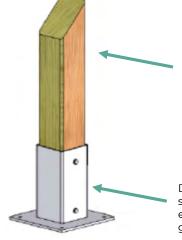


GUTENBERG bollard

With galvanised steel sheath. Aesthetic shape and variable height.







Angled and chamfered square (variable heights)

Dedicated metal sleeve to be embedded in the ground

SINGLE OR DOUBLE LEAF SWING GATE BARRIERS

SOLOSAR
TOURNESS COMMUNICATIONS

POUR DOUG WORTER STORIES CET UNIQUE

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POUR DOUG WORTER STORIES CET UNIQUE

Narrow road. Moderate 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

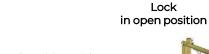
Horizontal wooden rail reinforced with steel tube Passage width **3 to 4 m**



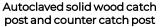
DURANCE gate

wood & steel reinforced and integrated concealed padlock

Horizontal wooden rail reinforced with steel tube Passage width **3.50 m**









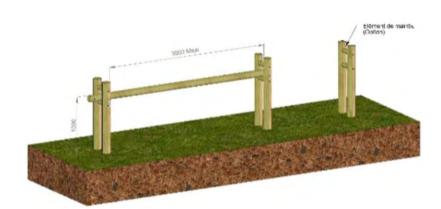
SLIDING GATES

Moderate risk of

vandalism.



Increased risk of vandalism.





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**





OPTIONS





Firemen's padlock + hydrant key



Intelligent ASSA ABLOYelectromechanical padlock



Strip with **ULTRAGUARD™** highly-reflective coating

HEIGHT RESTRICTION PIVOTING GANTRIES

SOLOSAR

ISINGENIA COMPLEXACIONET

POUR DIALE, VOTE PROPRE EST UNIQUE

POUR DIALE, VOTE PROPRE EST UNIQUE

HGVs and lorries







Completely pre-assembled and ready to install on a concrete base. Easy to open. Height 2.25 m - Passage width 2 or 3 m.

Single leaf swing



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.









Hanger kit

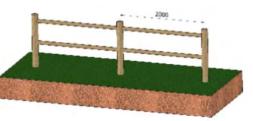
To fit a reflective strip (not supplied).

AUTOCLAVED SOLID WOOD FENCING



High fence















Low 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 autoclayed 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 autoclayed solid wood.

WOOD AND STEEL ECOFENCING













PREMIUM

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)

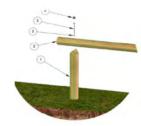






Needs sleeper-screwing special Anti-parking post to be embedded in concrete.





FLORENCE fence Interlocking with U-shaped steel post to be embedded in concrete.

Available with solid wood post (see ROMA model)

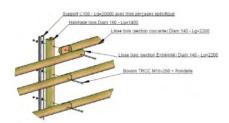




TOULOUSE fence

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





WOOD AND STEEL FENCING WITH C100 STEEL POST



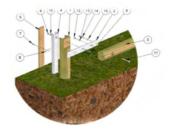
Low fence



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**



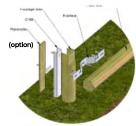




AMSTERDAM fence

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**



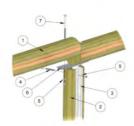




DEAUVILLE fence

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**





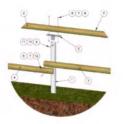


High fence

CADIZ fence

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







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CONTENTS

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- O2 Height restriction gantries
- 03 Bollards
- 04 Fences
- 05 Wheel stops and cycle hoops
- 06 Retaining walls
- 7 Autoclaved logs and sawn timber
- 08 Bespoke projects







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.



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.



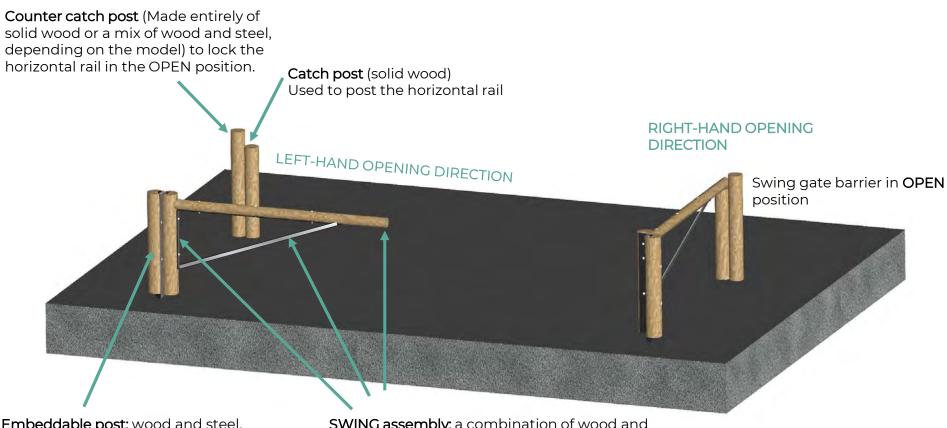






GATES

Vocabulary of technical parts for swing gates



Embeddable post: wood and steel, fitted with male hinges to be embedded in the ground.

SWING assembly: a combination of wood and steel, consisting of a horizontal wooden rail, a steel frame and a post with female hinges.

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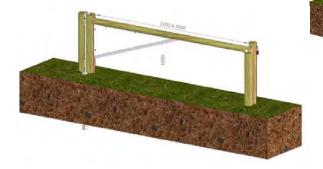
SINGLE LEAF SWING GATE

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







SINGLE LEAF SWING GATE



Wood and steel single-leaf gate

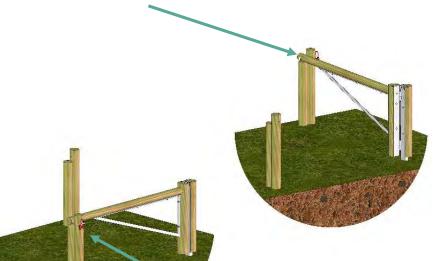


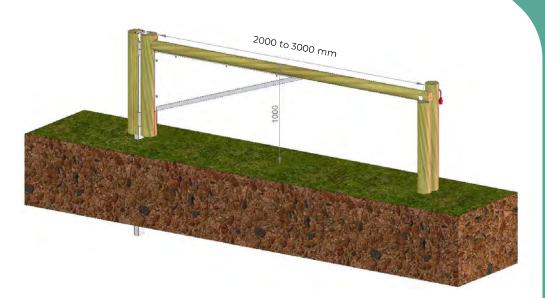


SINGLE LEAF SWING GATE - working principle



Lock in open position (Catch post and counter catch pot autoclaved solid wood cl. 4 optional)





Closed position with optional fireman's padlock



SINGLE LEAF SWING 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.



triangular lock (firefighters

have this type of key).

SINGLE 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

SINGLE LEAF SWING GATE



Wood and steel barrier



Made to measure



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

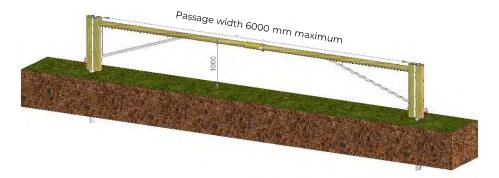
DOUBLE LEAF SWING GATE

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 or 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





DOUBLE LEAF SWING GATE



wood and steel double-leaf barrier

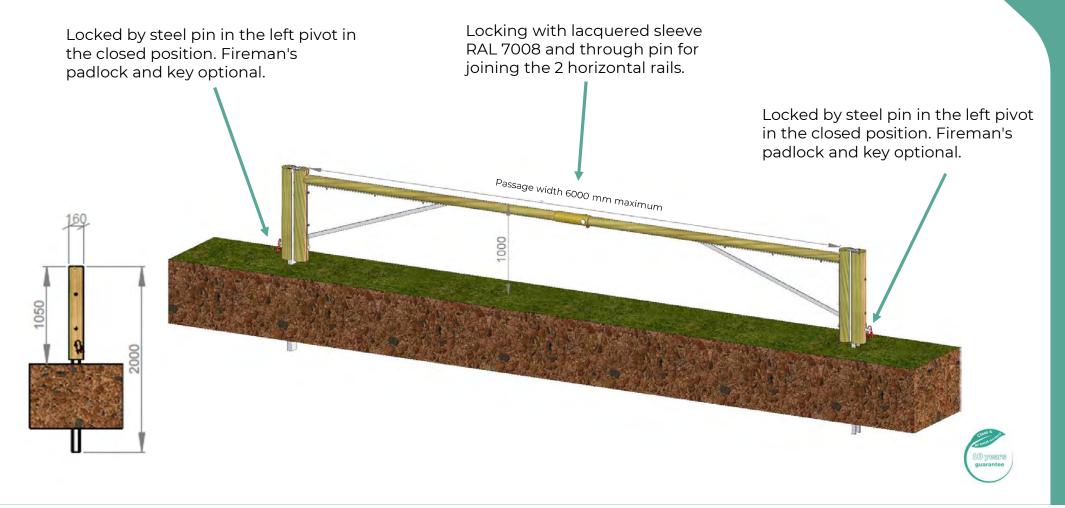




More info on → www.solosar.fr/en/solonature

DOUBLE LEAF SWING GATE - Working principle



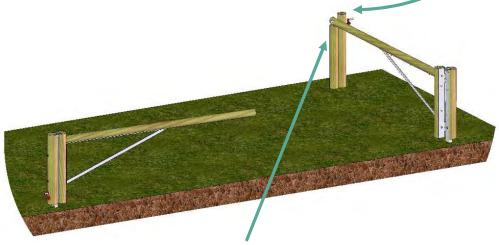


solonature SOLOSAR

DOUBLE LEAF SWING GATE

✓ 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).

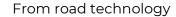


DOUBLE LEAF SWING GATE

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- ✓ Intelligent ASSA ABLOY electromechanical padlock.
- ✓ 2 key variants: electromechanical or 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









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CHICANE GATE SET

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 (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
- √ 1-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.





CHICANE GATE SET

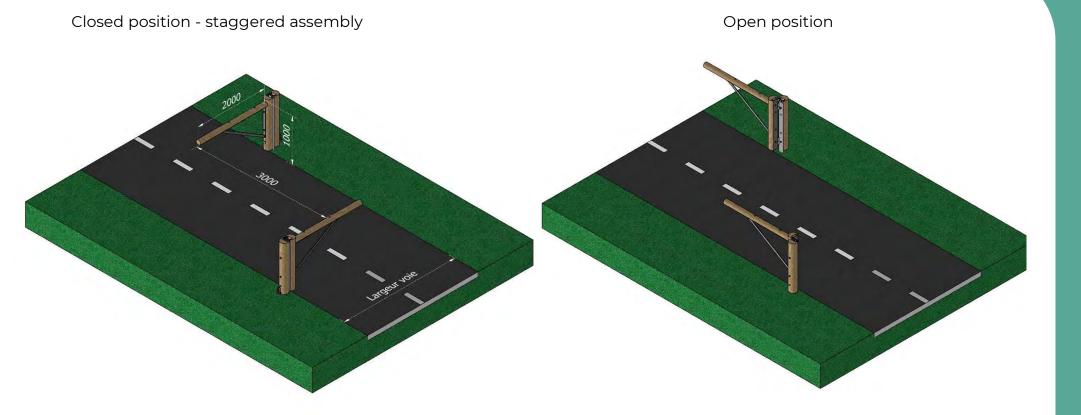






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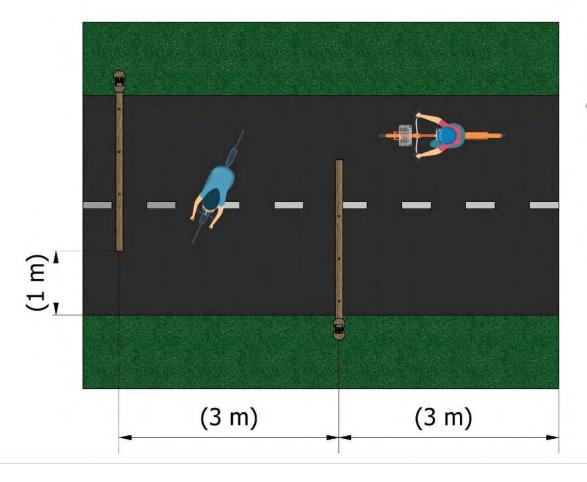
CHICANE GATE SET - Working principle



CHICANE GATE SET - Working principle



Dedicated layout for cyclists





Road traffic zone

CHICANE GATE SET - Detailed plan





SOLOSAR TOURDING CALAMACAGE

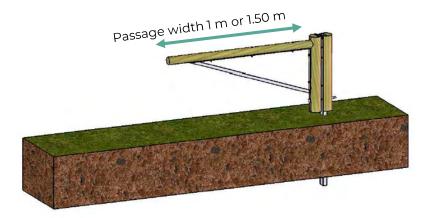
CHICANE GATE SET SPECIAL FOR NARROW ROADS

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





CHICANE GATE SET SPECIAL FOR NARROW ROADS







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CHICANE GATE SET SPECIAL FOR NARROW ROADS Working principle

Closed position - staggered assembly

Open position

Open position

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CHICANE GATE SET SPECIAL FOR NARROW ROADS Detailed plan



The locking pin in the swivel post is a real asset for protection against vandalism and unintentional opening.



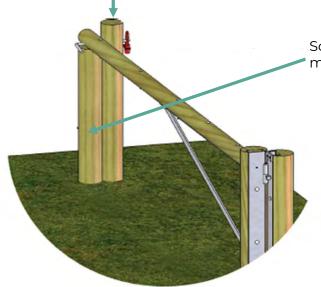
SO Onature SOLOSAR TOURNING E SOM (MOMENTAL MANAGEMENT POUR OPUN, VOTRE projet est unique.

CHICANE GATE SET SPECIAL FOR NARROW ROADS

✓ 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

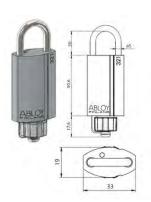
✓ OPTION 2: fireman's padlock + hydrant key, red epoxy paint, for locking your barriers and gates.



- 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).

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 or 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







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From road technology



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 offroad vehicles, it is advisable to complete the installation with fixed or removable bollards.

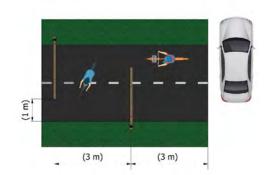
LOCATION ON THE CYCLE PATH

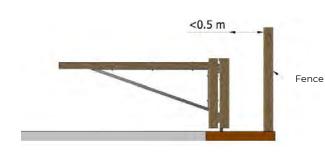
It is important to leave a clearance of MINIMUM 3 m **before an intersection** to allow cyclists to slow down and get off their bikes. Then place the barriers about 3 m apart, to make it easier for bicycles with children's trailers to pass through, for example. Finally, leave a passage of at least 1m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











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





EDGE REINFORCED BARRIER

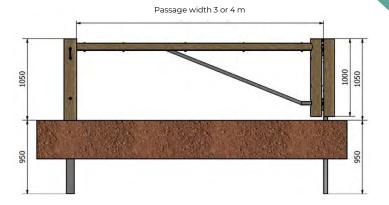
TECHNICAL INFO

- ✓ **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
- 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)









EDGE REINFORCED BARRIER



EDGE barriers

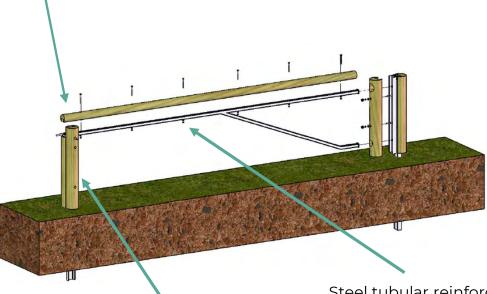




EDGE REINFORCED BARRIER- Working principle

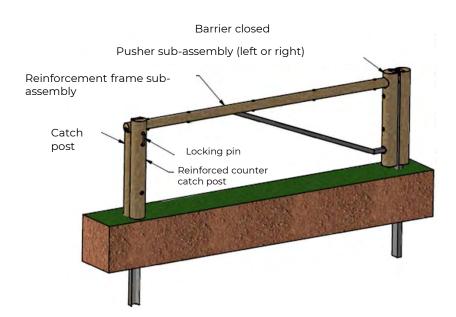


The horizontal rail is locked in the closed position by a steel link and pin (padlock optional).



Receiver post in closed position

Steel tubular reinforcement frame integrated along the entire length of the horizontal rail.



OPTIONS:

- a) Receiver module for locking in the open position
- b) Fireman's padlock + locking key

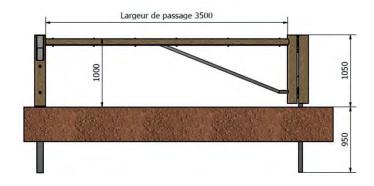


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DURANCE MODEL

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)



DURANCE MODEL



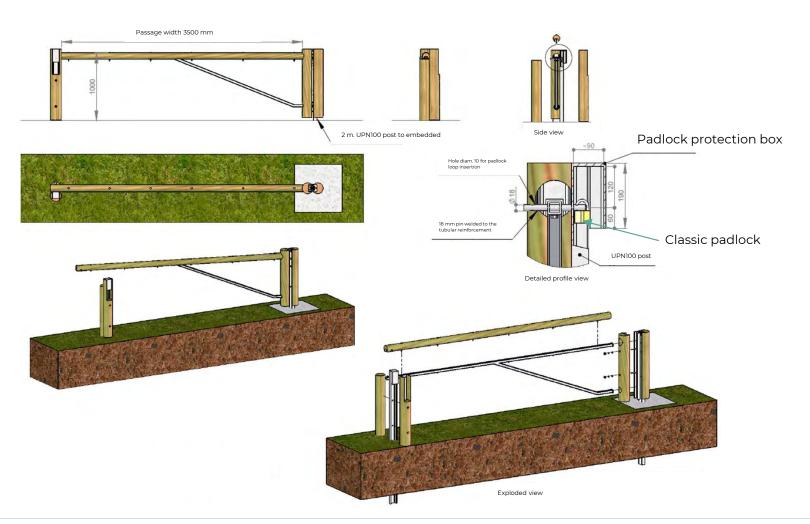
DURANCE barriers





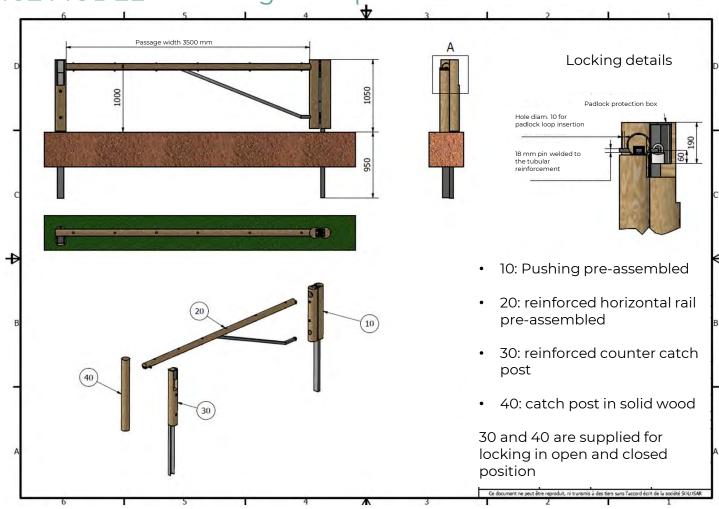
DURANCE MODEL - Working Principle







DURANCE MODEL - Working Principle







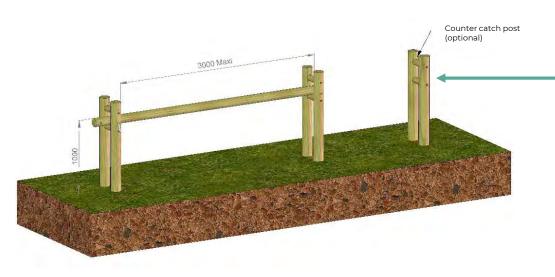
SOLID WOOD SLIDING ARM

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 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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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



REINFORCED SLIDING ARM



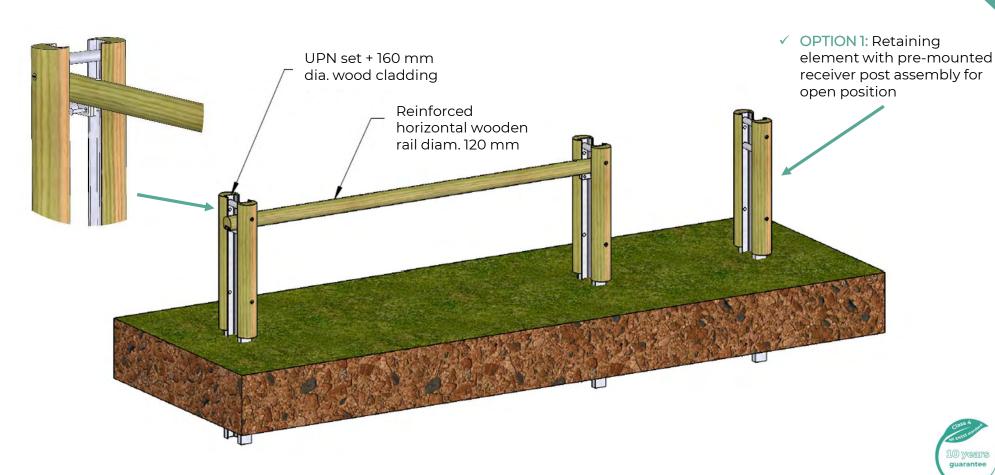
The reinforced sliding model is ideal for sites subject to vandalism.





REINFORCED SLIDING ARM - Working principle

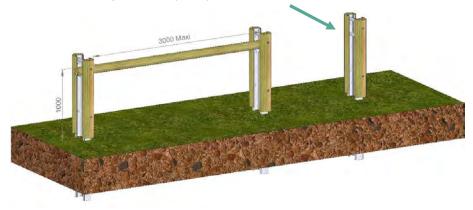






REINFORCED SLIDING ARM

✓ 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 coati
- ✓ Pre-galvanised steel strip
- ✓ Application of **ULTRAGUARD™**reflective coating
- ✓ Strip ready to be fixed to any **SOLONATURE®** gate







SINGLE-LEAF WOOD AND STEEL

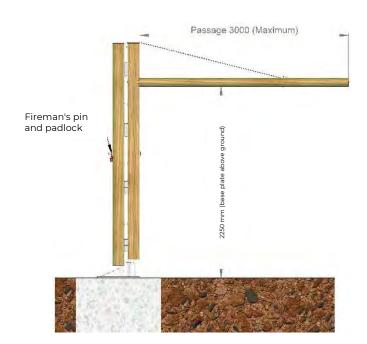
TECHNICAL INFO

- ✓ 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)











SINGLE-LEAF WOOD AND STEEL

Single-leaf height restriction gantries

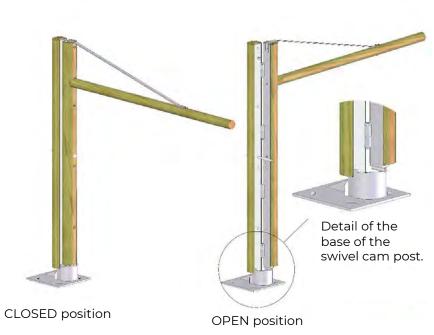






SINGLE-LEAF WOOD AND STEEL

Working principle

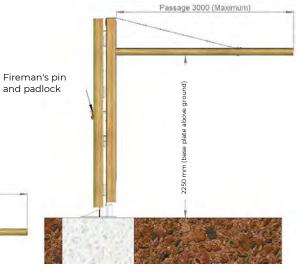


Fireman's pin and padlock

Passage 3000 (Maximum)

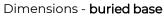
Eireman's pin and padlock

Passage 3000 (Maximum)



Dimensions - surface mounted

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







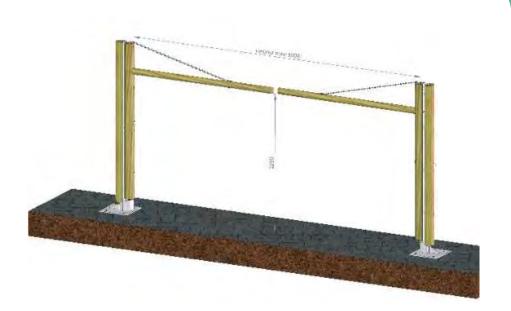
WOOD AND STEEL DOUBLE LEAF

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









WOOD AND STEEL DOUBLE LEAF

Double-leaf swing gantry height restrictors

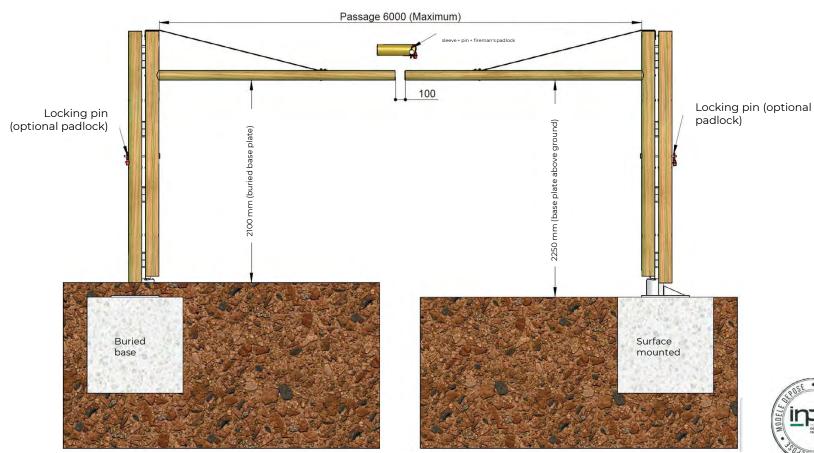






WOOD AND STEEL DOUBLE LEAF

Working principle



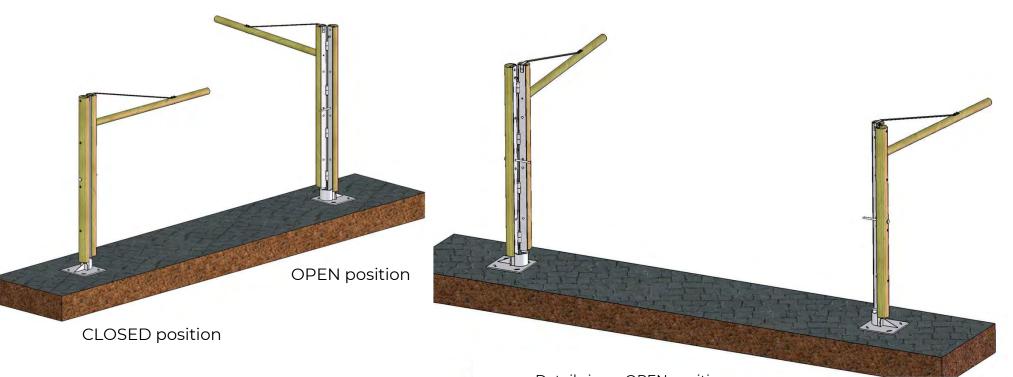






WOOD AND STEEL DOUBLE LEAF

Working principle



Detail view - OPEN position

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



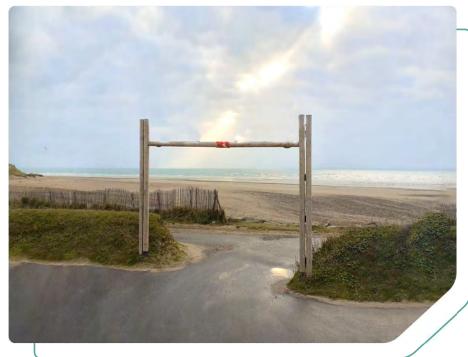




WOOD AND STEEL DOUBLE LEAF

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

Double height restriction gantry - seaside resort







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



WOOD AND STEEL DOUBLE LEAF

HGV SPECIAL

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









WOOD AND STEEL DOUBLE LEAF HGV SPECIAL



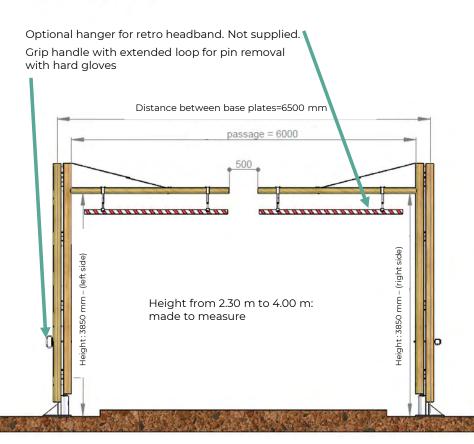


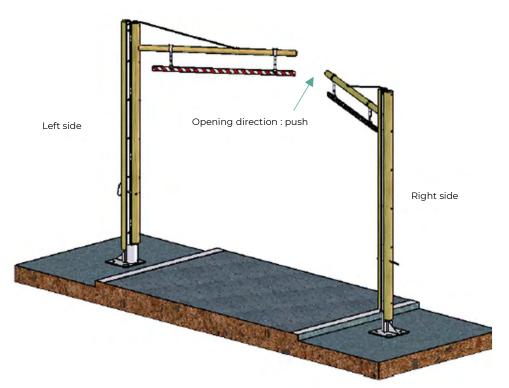


WOOD AND STEEL DOUBLE LEAF

HGV SPECIAL

Working principle











WOOD AND STEEL DOUBLE LEAF HGV SPECIAL

Gantry - COFIROUTE motorway service areas







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.

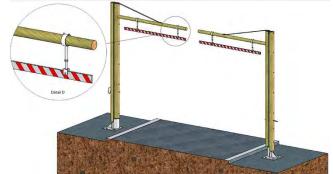




OPTIONS

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





Example of use



Hanger detail

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

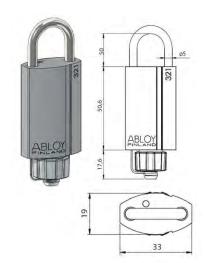


- 14 mm internal cross-section.
- Inside material of the triangle: brass
- · Key supplied
- Can be quickly unlocked by firefighters thanks to its triangular lock (firefighters have this type of key).



OPTIONS

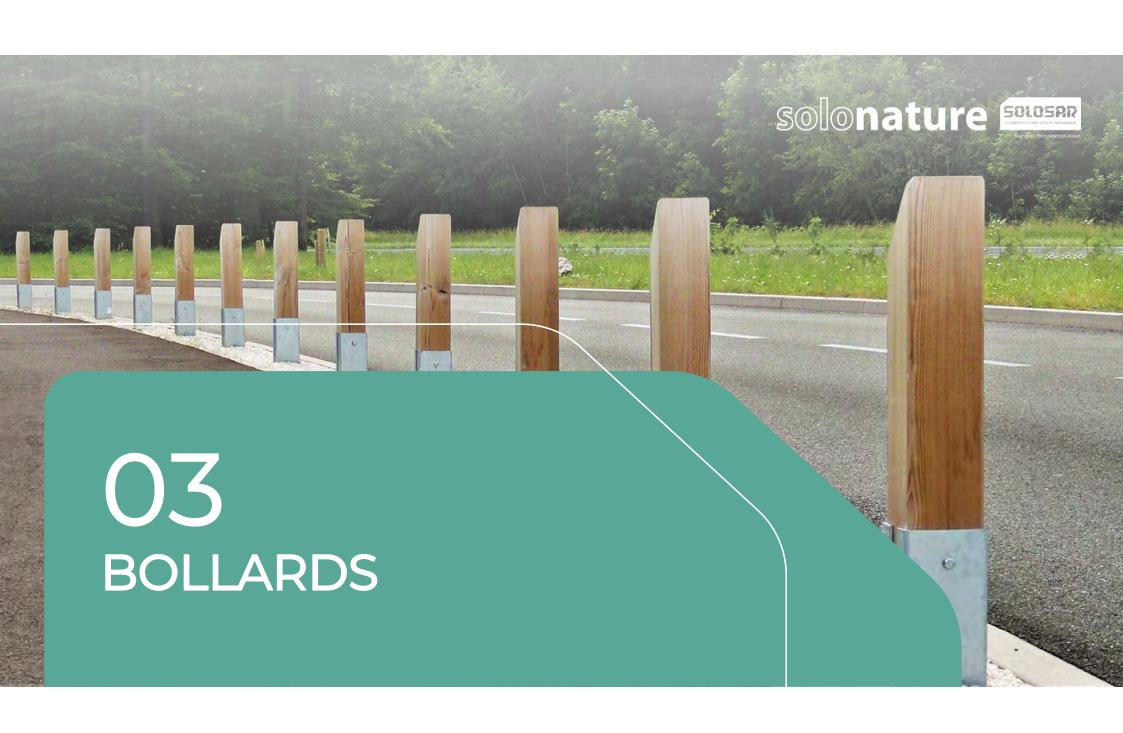
- ✓ OPTION 3: Intelligent padlocks and keys for one-stop access management
- ✓ Intelligent ASSA ABLOY electromechanical padlock.
- ✓ 2 key variants: electromechanical <u>or</u> purely mechanical
- ✓ The lock is operated from the outside by a CLIQ **electronic key** programmed by SOLOSAR.
- ✓ The key 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.











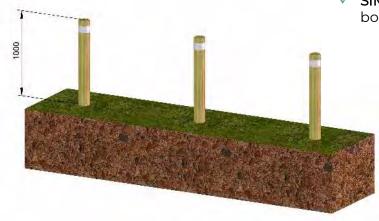
FIXED ROUND BOLLARDS - ACCESS CONTROL

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





FIXED ROUND BOLLARDS - ACCESS CONTROL







FIXED ROUND BOLLARDS - ACCESS CONTROL

Fixed bollards to be embedded in the ground



Permanent stock



FIXED ROUND BOLLARDS - ACCESS CONTROL

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



140mm fixed bollards



SOLID WOOD SQUARE BOLLARDS - ACCESS CONTROL

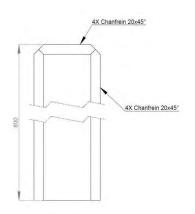
TECHNICAL INFO

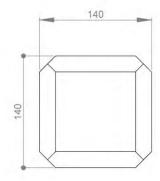
- ✓ **Solid sawn timber:** autoclaved Scots pine class 4 solid log to EN 335, guaranteed 10 years against rotting
- ✓ **Overall dimensions:** diam. 140 mm x 140 mm (variable height to order)
- ✓ Made-to-measure: please contact us
- ✓ **Typical application**: restricting access to motorised vehicles on 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
- \checkmark 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









SOLOSAR SOLOSAR

SOLID WOOD SQUARE BOLLARDS - ACCESS CONTROL



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





GUTENBERG FIXED BOLLARDS - ACCESS CONTROL

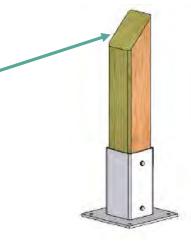
TECHNICAL INFO

- ✓ 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.





GUTENBERG FIXED BOLLARDS - ACCESS CONTROL

GUTENBERG bollard - Sarreguemines industrial estate





BOLLARDS

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



RICANTO on base plate post



RICANTO C100 to embed



SOlonature SOLOSPR TOURNISCE VOIL - NOLINT - NOLINE AND THE

BOLLARDS

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

RICANTO terminal - Corsica coastline



RICANTO terminal - Netherlands





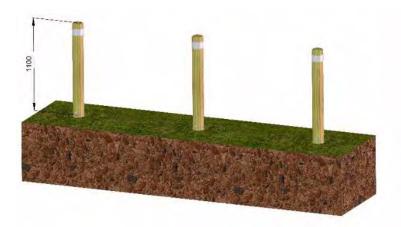
STANDARD REMOVABLE BOLLARD - ACCESS CONTROL

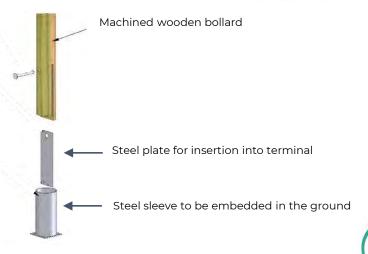
TECHNICAL INFO

- ✓ 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





SOLOSAR MONOTORIO COMPANDA COM

STANDARD REMOVABLE BOLLARD - ACCESS CONTROL



Bollard with removable base



SOLOSPR TOHENDSCHOOL SOLUTION AND THE PROPERTY OF THE PROPERTY

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:

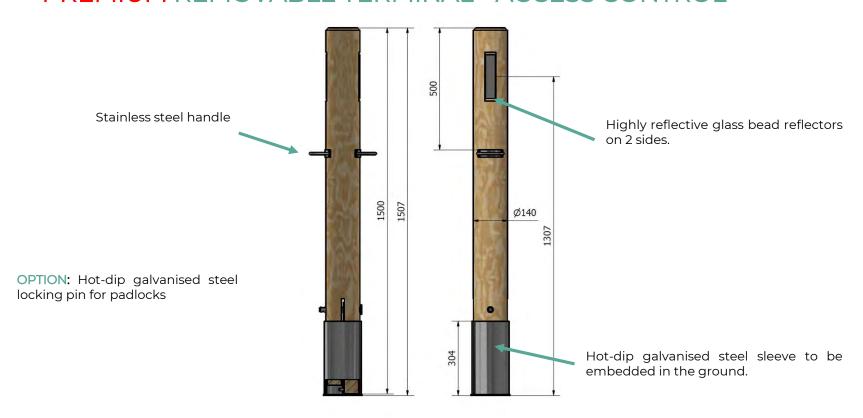
- ✓ Solid wood: aesthetics and durability
- ✓ Benefits: Total safety reinforced by factory-fitted two-sided reflective reflector
- ✓ Installation: to be embedded in concrete block
- ✓ In compliance with the Order of 18 September 2012 relating to technical requirements for the accessibility of roads and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







PREMIUM REMOVABLE TERMINAL - ACCESS CONTROL







solonature solosar

PREMIUM REMOVABLE TERMINAL - ACCESS CONTROL

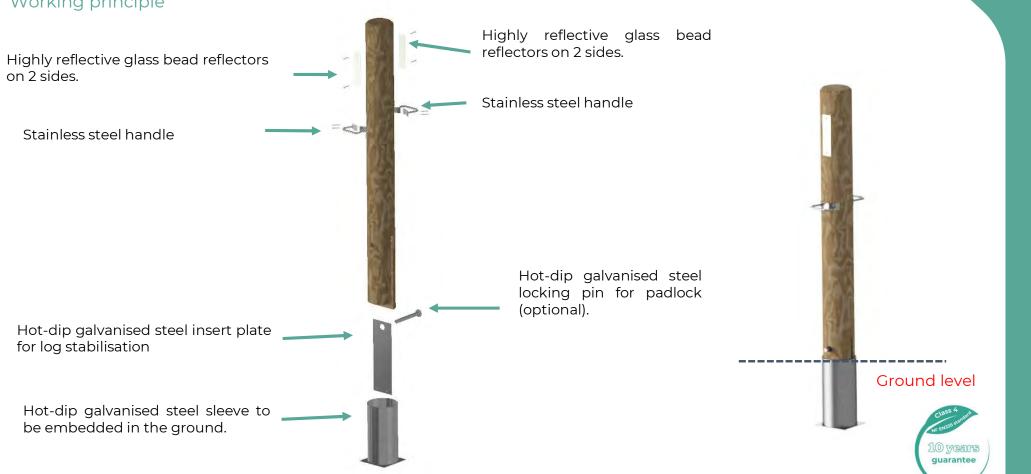






PREMIUM REMOVABLE TERMINAL - ACCESS CONTROL

Working principle





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.

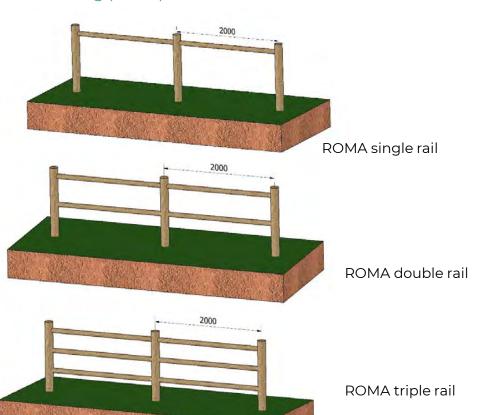


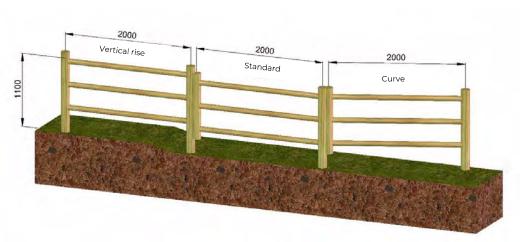




ROMA

Working principle





Examples of configurations using on-site wood recutting. Easy to create curves by doubling the wooden posts.



solonature solosar

ROMA SINGLE RAIL

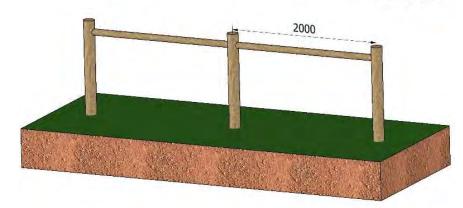
TECHNICAL INFO

- ✓ 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

Ø80 Ø140 Ø140

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





SOLOSAR TOHORICE GOME HOLDER AND ADDRESS A

ROMA SINGLE RAIL





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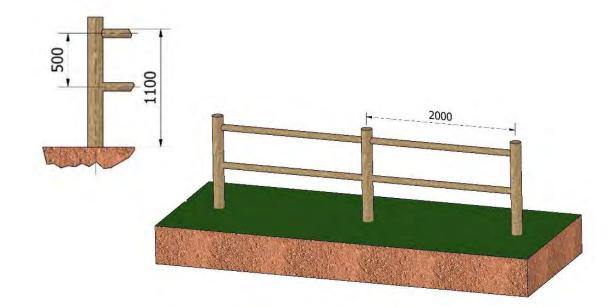
ROMA DOUBLE RAIL

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





ROMA DOUBLE RAIL







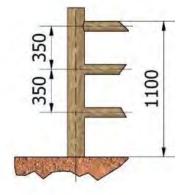
TRIPLE RAIL ROMA

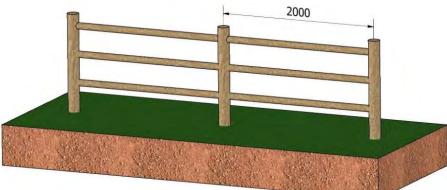
TECHNICAL INFO

- ✓ 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







TRIPLE RAIL ROMA







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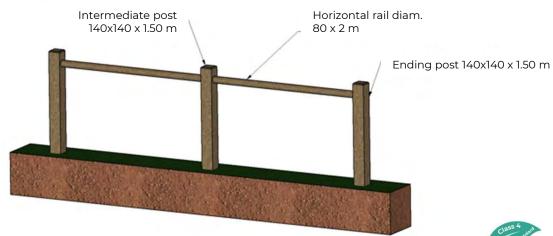
TREVI - SOLID WOOD SQUARE POST

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
- √ Fconomic





TREVI - SOLID WOOD SQUARE POST





TREVI square posts in autoclaved solid wood



SOLOSAR EUROMUSIC COM JEGUITI - ANIALAMEN

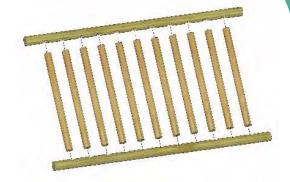
MILANO

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.





MILANO



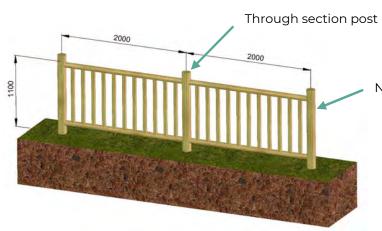




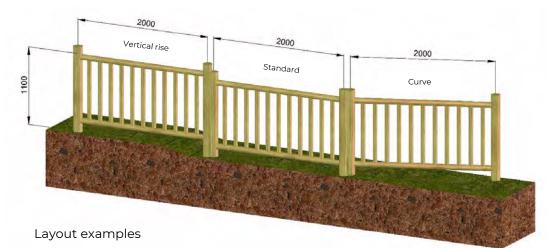
SOLOSPR TOLOSPR

MILANO

Working principle



Non-through end post





SOLOSAR IMPRIST COM CHANGE AND ADMIT

MILANO



MILANO fence with reinforced steel post



TORINO

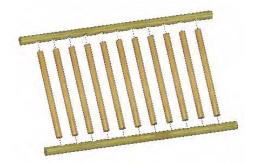
TECHNICAL INFO

- ✓ **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

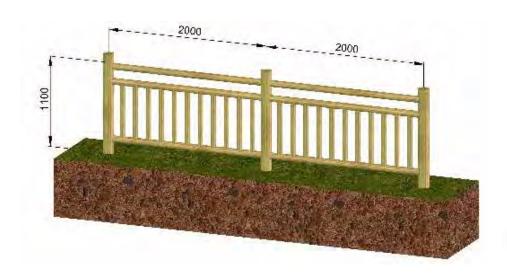
ADVANTAGES AND BENEFITS:

- 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.





TORINO









TORINO

TORINO fencing with steel anchors to ensure rigidity and easy removal of wooden posts.

See all our anchoring solutions in the ANCHORAGES section.





LOW FENCES WITH SLEEPER SCREWS



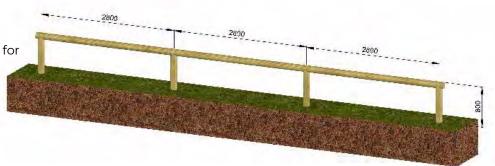
LONDON

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



LOW FENCES WITH SLEEPER SCREWS



LONDON

London fence - detail of tongue and groove machining



London fence - large linear

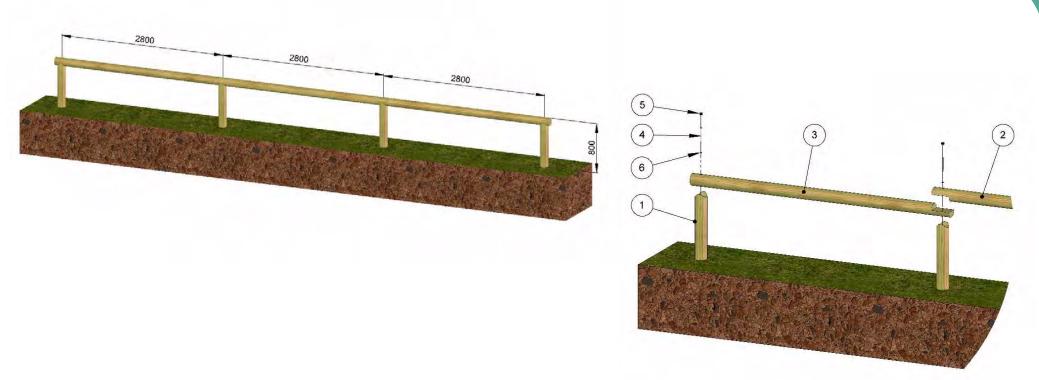


LOW FENCES WITH SLEEPER SCREWS



LONDON

Working principle





ANTI-PARKING FENCES

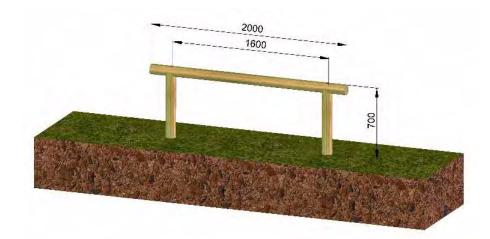
Solonature Solosar S

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

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





ANTI-PARKING FENCES

BRUXELLES



Made-to-measure on a Bruxelles base





HIGH WOOD AND METAL FENCES



FLORENCE DOUBLE RAIL

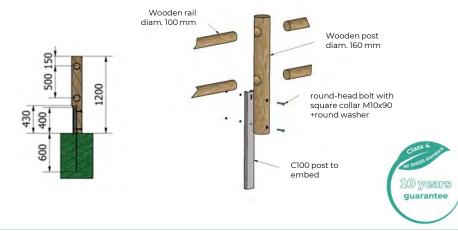
TECHNICAL INFO

- ✓ 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

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







HIGH WOOD AND METAL INTERLOCKING FENCES SOLOSAR



FLORENCE



Made-to-measure on a FLORENCE base



WOOD AND METAL HIGH FENCES

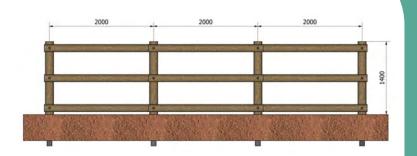


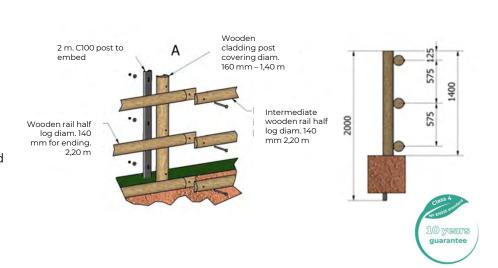
TOULOUSE

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)

- √ The highest fence in the SOLONATURE® range
- √ Fall protection railing effect
- \checkmark 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
- Reduced vandalism, controlled maintenance budget and total security
- ✓ Installation: post to be embedded in concrete block
- Made in France





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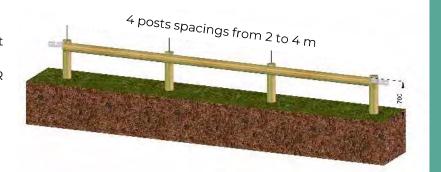
WOOD AND METAL FENCES METAL POST - WOOD CLADDING

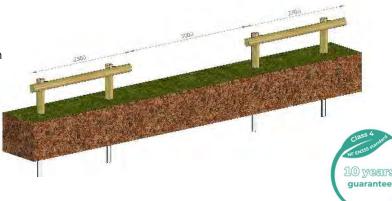
AMSTERDAM

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

- ✓ 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





WOOD AND METAL FENCES METAL POST - WOOD CLADDING



AMSTERDAM



Amsterdam barriers - Car parks and cycle paths

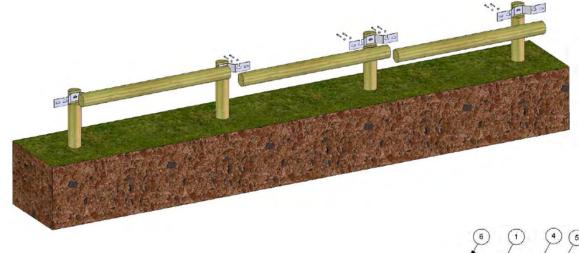


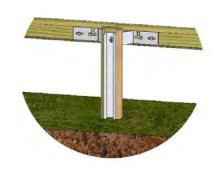
WOOD AND METAL FENCES METAL POST - WOOD CLADDING



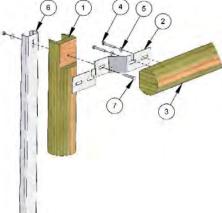
AMSTERDAM

Working principle















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

- √ 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







WOOD AND METAL FENCES METAL POST - WOOD CLADDING



ARCACHON





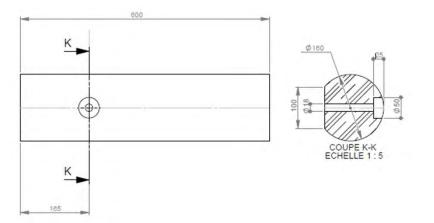
WOOD AND METAL FENCES METAL POST - WOOD SUCCESSION CLADDING

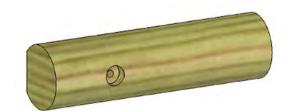
ARCACHON

Treatment of ends

End of line Straight - solid wood round end









HIGH WOOD AND STEEL FENCES

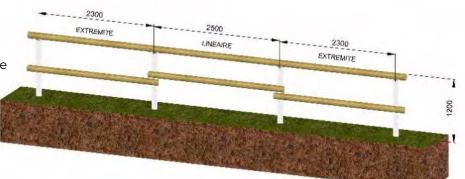
SO Onature SOLOSPR TOMHUNDO FOR SOLUTION AND ADMINISTRATION AND ADMINI

CADIZ

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.

- ✓ 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





HIGH WOOD AND STEEL FENCES



CADIZ

CADIZ model - Luxembourg





HIGH WOOD AND STEEL FENCES

CADIZ

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



✓ OPTION 2: Plunging end terminal module





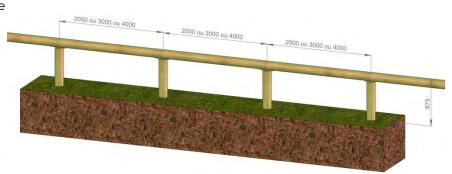
DEAUVILLE

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.

- ✓ 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







DEAUVILLE







SOLOSPR SOLOSPR

DEAUVILLE

Treatment of ends

The ends can be produced using a variety of processes:

- 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)





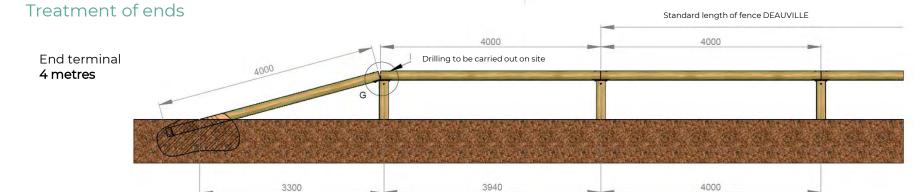


Photo 1 Photo 2 Photo 3



SOLOSPIR (CORPUTS) SE FORM - SOLOMO - AND HAZ WHITE POUR FOUNT - STUDIES - AND FOUNT - STUDIES -

DEAUVILLE





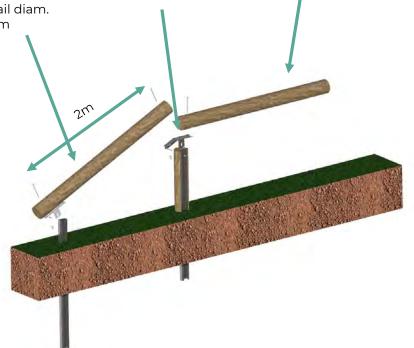


DEAUVILLE

Treatment of ends

✓ OPTION 1: 2-Metre plunging end of line







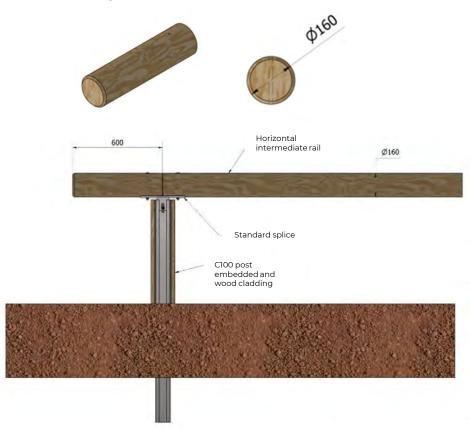




DEAUVILLE

Treatment of ends

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









DEAUVILLE

DEAUVILLE fence in single units - Car park



DEAUVILLE fence - Cycle paths



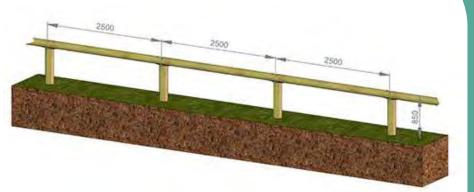
DINARD

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.

- ✓ 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
- \checkmark 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







DINARD



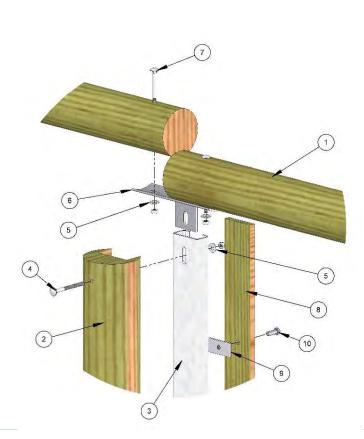


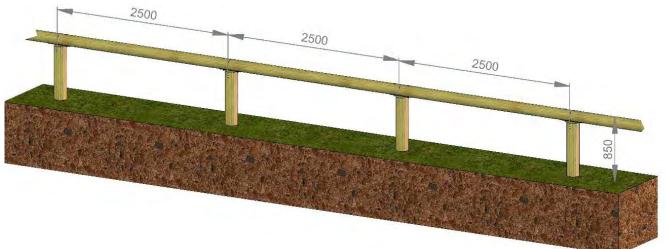


SOLOSAR MORNING COMPANDAMENT

DINARD

Working principle





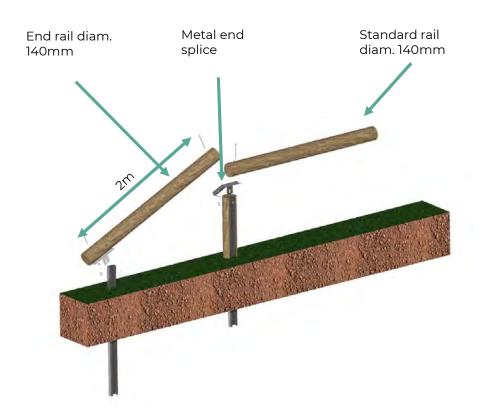


solonature

DINARD

Treatment of ends

✓ OPTION 1: 2-Metre plunging end terminal









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.



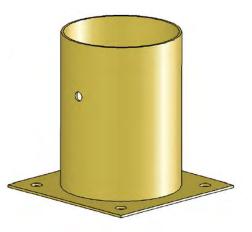
Powder-coated sleeve RAL 7008



STEEL SHEATH

Steel: S235JR hot-dip galvanised to ISO 1461

Available in a galvanised finish or 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.





STEEL ANCHOR ON PLATE

Steel: S235JR hot-dip galvanised to ISO 1461 Available in **galvanised** or **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.



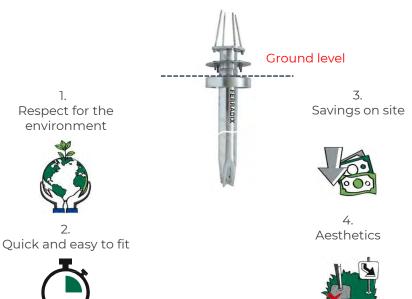
ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE

The 1st 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





cobblestones



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.



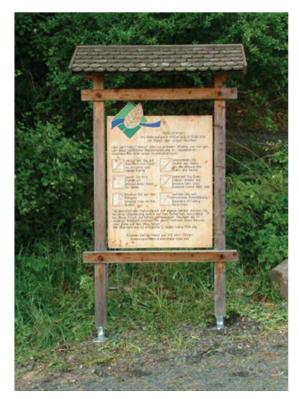
Adjustable height above ground (minimum 5 cm) to prevent the wood section from coming into contact with ground humidity.



ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE







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 CO² 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 double-conical 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)







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 → length 30 cm and diam. 60mm

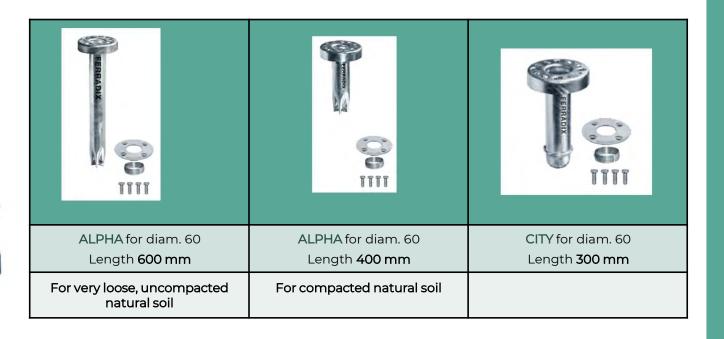


CITY anchoring piles Addition of 20% of concrete

For hard floors, concrete and paved











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 Length **400 mm** For compacted natural soil





ALPHA for diam. 60
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.





ANCHORING BOLLARDS OR LOGS WITHOUT CONCRETE

INSTALLATION METHOD









into the ground



solonature

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.



Biconical ring



Stage 5: intermediate check of the straightness of the pile in the ground





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



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











NON-INTRUSIVE PHYSICAL WARNING FOR PARKING SPACES

WHEEL STOP





TECHNICAL INFORMATION - ANCHORING



WHEEL STOP

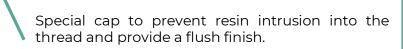
- ✓ OPTION 1: ready-to-install chemical anchoring kit for asphalt
 - ➤ 1 cartridge of chemical anchorant. With mixer 300 ml. Universal anchorant **for asphalt** (asphalt). Gun not supplied. For +/- 60 anchors.
 - > 3 hex M12x80 galvanised screws
 - > 3 M 12 Washers
 - > 3 ATP zinc-plated steel female 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



HOOP FOR ALL BICYCLES WOOD AND METAL



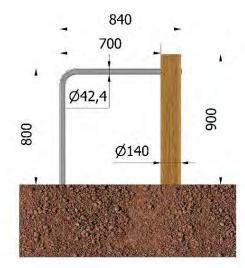
2-SPACE BICYCLE HOOP

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





HOOP FOR ALL BICYCLES WOOD AND METAL



2-SPACE BICYCLE HOOP







READY-TO-INSTALL KIT RETAINING WALL



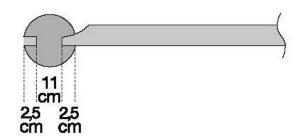
RETAINING WALL

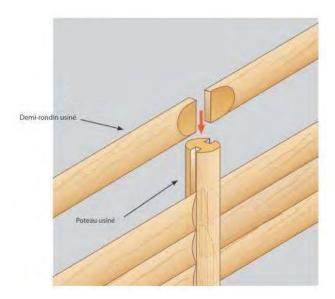
TECHNICAL INFO

- ✓ 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







READY-TO-INSTALL KIT RETAINING WALL



RETAINING WALL

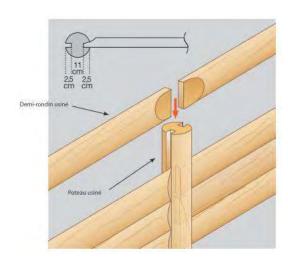




READY-TO-INSTALL KIT RETAINING WALL



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)
- \checkmark 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.







TECHNICAL INFO

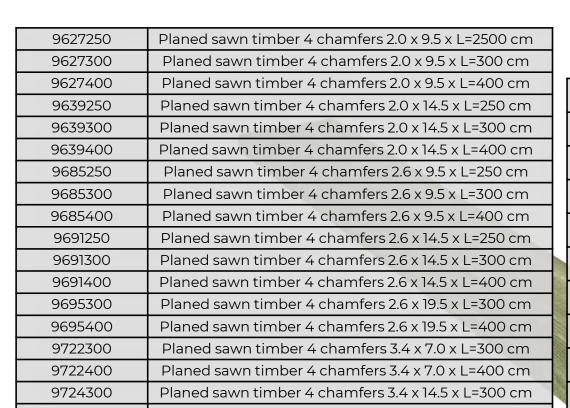
- ✓ Autoclaved Scots pine class 4 to EN 335 with 10-year guarantee against rotting
- ✓ Boards and logs from the Black Forest
- ✓ Custom cut-outs and dimensions: please contact us
- ✓ Dimensions: see following pages







SAWN TIMBER



Planed sawn timber 4 chamfers 3.4 x 14.5 x L=400 cm

Autoclaved Scots pine cl. 4 - planed and chamfered boards

9724400



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

LOGS



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
1210300 1210400	Milled log diam. 10 L=300cm Milled log diam. 10 L=400cm

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
1214100	Milled log diam. 14 L=100cm
1214125	Milled log diam. 14 L=125cm
1214150	Milled log diam. 14 L=150cm
1214175	Milled log diam. 14 L=175cm
1214200	Milled log diam. 14 L=200cm
1214250	Milled log diam. 14 L=250cm
1214300	Milled log diam. 14 L=300cm
1214400	Milled log diam. 14 L=400cm
1214500	Milled log diam. 14 L=500cm



LOGS



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
1216200	Milled log diam. 16 L=200cm
1216250	Milled log diam. 16 L=250cm
1216300	Milled log diam. 16 L=300cm
1216400	Milled log diam. 16 L=400cm
1216500	Milled log diam. 16 L=500cm
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
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
1220300	Milled log diam. 20 L=300cm
1220400	Milled log diam. 20 L=400cm
1220500	Milled log diam. 20 L=500cm

Dimensions are expressed in **diameter x length**



½ LOGS

SOLOSAR TOLOSAR

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**





BESPOKE SOLUTIONS



OUR BESPOKE CREATIONS: DON'T HESITATE TO CONTACT US

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





SOLOSAR IDJUMUSO KOME JODNET JANASANET

OUR BESPOKE CREATIONS: DON'T HESITATE TO CONTACT US

C100 cycle barrier on customised plate - Strasbourg





solonature SOLOSAR

OUR BESPOKE CREATIONS: DON'T HESITATE TO CONTACT US

Height restriction gantry with central locking





SOlonature SOLOSAR IMPANSOLOM GRANGANIT

OUR BESPOKE CREATIONS: DON'T HESITATE TO CONTACT US

Special fencing and gates without sharp edges - Primary school







OUR BESPOKE CREATIONS: DON'T HESITATE TO CONTACT US

Wooden crosspiece for a staircase in a sheltered environment





ULTRAGUARD™

Highly reflective coating for vertical metal, concrete or wood surfaces

WHAT IS ULTRAGUARD?

- ULTRAGUARD™ 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™ 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™ can be applied to our custom-made wood or metal components: please consult us



