Our expertise

The Tertu offer is dedicated to Road & sites equipment worldwide. It does reflect the capacity of the company to dedicate its expertise, reactivity and team spirit to major projects where users safety and environment protection matter.

Our home made products meet the requirements of all applicable European standards. Tertu provides a wide range of various technical and original solutions.

An international network

Tertu is a French company based in Normandy and an active member of a Road Industry related international network.

A favorable situation which does help Tertu to look for new business opportunities necessary to its continuous development.

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+33 2 33 36 11 02
Or send us an inquiry via our website
www.tertu.com

Douglas Fir : the specie with a big heart

On account of its structure, the Douglas fir is a natural choice as it is an exceptional material in terms of quality and natural durability.
Its heart is deemed to be rot-proof. By 2015, France will have the largest Douglas fir resource in the world.
A leader in the use of the Douglas fir since the 1980s, Tertu has continued to develop, using this specie in increasingly sophisticated applications: guardrails, sound barriers and protections, gangways, bridges and other crossings.

Pressure-treated wood with chromium and arsenic-free preservatives

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roads and sites worldwide

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Photos TERTU - Maquette J. SOURD - IMPRIMERIE CAEN REPRO 02 31 95 27 66 - February 2014

Safe itineraries

Guardrails & protections

A recognized expertise
in the Road Restraint Systems field

Tertu is the leading manufacturer
of mixed wood & steel crash barriers worldwide

All our systems are CE marked
according to EN 1317 requirements

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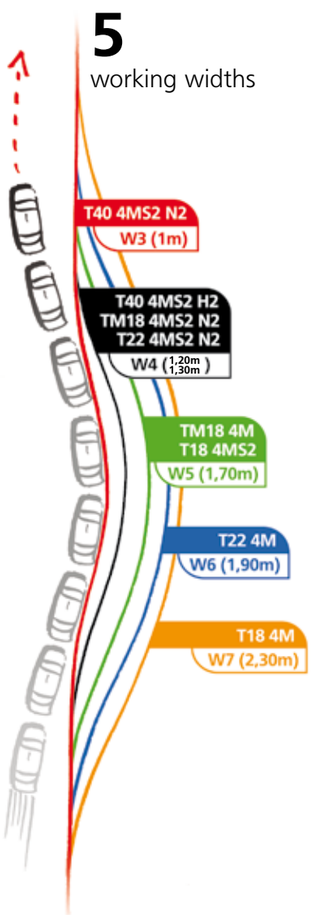
Mixed wood & steel restraint system



Containment level N2

▶ TM18 4M - W5: round log

W 5 working width with a 4 m post spacing. The top quality barrier in this category

▶ TM18 4MS2 - W4: round log

W 4 working width with a 2 m post spacing. A new TM18 configuration added to the range in 2014

▶ T22 4M - W6: half round log

a particularly suitable alternative where available space for a proper installation is limited

▶ T22 4MS2 - W4: half round log

probably the most competitive timber guardrail of the market in terms of price and performances

▶ T18 4M - W7: round log

the original successful system who became the reference in France and worldwide.

▶ T18 4MS2 - W5: round log

tested with a post every 2 m

Containment level L2 (H2 + N2)

▶ T40 4MS2 - W4 - W3: half round log

a double railing system for a higher containment level and an increased safety: HGV heavy traffic, steep roads...

Containment level H2

▶ T40 Bridge Parapet W 5:

the wood & steel solution for bridges

TLC18

Mixed Wood & Steel Guardrail TLC18

A performing & cost-saving model

The First Mixed Wood & Steel Guardrail With Containment Level N1, CE Certified

- Containment level N1 - 80 Km/h
- Working Width W5, Post spacing : 4 m
- Minimum length of need, only : 40 m
- CE Certified
- Quick & Easy installation

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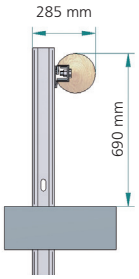
roads and sites worldwide

Mixed Wood & Steel Guardrail TLC18

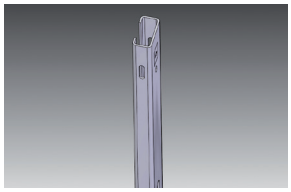
18 cm Round log, 4 m length reinforced with a G profile steel on the back.

C100 steel post in 1.50 m with optional wooden cladding. Adjustable post spacing.

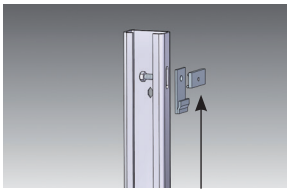


Side view

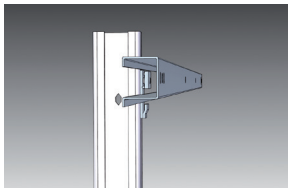
Assembly



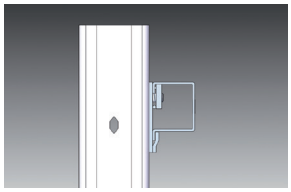
Traffic flow



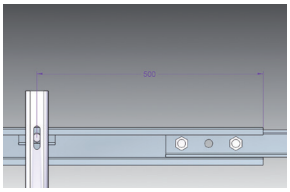
Tightening plate



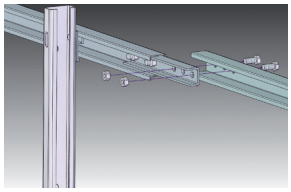
G Steel profile installation



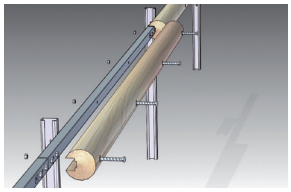
G Steel profile adjusted



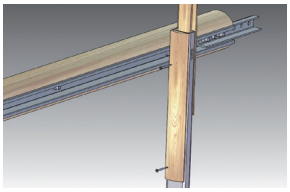
Installation fishplate



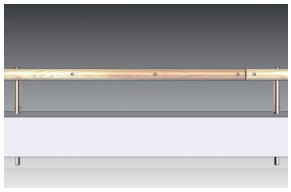
Connection of the 2 G steel



Installation of wooden beams



Installation of wooden cladding



Complete installation view

To make the installation easier, the beam is attached with a G profile steel.
To be installed on site.

Testing conditions

Containment level	Crash test criteria				Kinetic energy Kj	Recommended level of use
	Test	Speed of impact Kph	Angle of impact °	Total weight of vehicule Kg		
N1	TB 31	80 Kph	20°	1500 Kg	43,3 Kj	Normal containment

Performances

Model	Test	Working width W	Dynamic deflection Dm	Vehicle intrusion	Severity class	Barrier length
TLC18 4M	TB 31	W5 (1,70 m)	Dm (1,00 m)	VIn 1,0 m (VI3)	A (ASI ≤ 1.0)	40 m

Standards

All our guardrails have been tested in accordance with the requirements of standards EN 1317 1-2-5.
TLC18: Containment level N1
CE n°1826 CPR 09 02 06 DR9

Notified body: ASCQUER

All our guardrails are ISO 9001 certified and CE marked since december 21, 2009

Pressure-treated wood with chromium and arsenic-free preservatives

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TM18

TM18 wood & steel guardrails

An improvement of a worldwide best seller

The most efficient Tertu timber guardrail system

- Working width W5, 4 m post spacing
- Working width W4, 2 m post spacing
- CE certified
- Simplified assembly, easy installation

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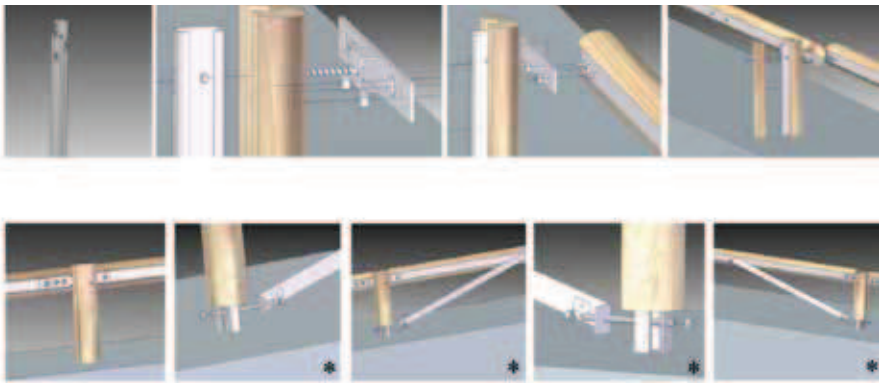
TM18 wood & steel guardrails

Diameter 18 cm round log, backed with a steel U channel

C100 steel post in 1.50 m length covered with wood. Tensioner system

Side view



*Steel tensioner every 72 m

▶ Testing conditions

Containment level	Crash test criteria				Kinetic energy Kj	Recommended level of use
	Test	Speed of impact Kph	Angle of impact °	Total weight of vehicule Kg		
N2	TB 32	110 Kph	20°	1500 Kg	81,9 Kj	Normal containment
N2	TB 11	100 Kph	20°	900 Kg	40,6 Kj	Normal containment

▶ Performances

Model	Test	Working width W	Dynamic deflection Dm	Vehicle intrusion	Severity class	Barrier length
TM18 4M	TB 32	W5 (1,70 m)	(1,20 m)	VIn (1.30 m) VI4	A (ASI ≤ 1.1)	80 m
TM18 4MS2	TB 32	W4 (1,30 m)	(1,10 m)	VIn (1.00 m) VI3	A (ASI ≤ 0.7)	80 m

▶ Standards

All our systems have been tested in accordance with the EN 1317-1-2-5 standards

TM18 4M: level N2
CE n° 1826 CPD 09 02 06
DR6 dated March 21, 2013

Notified body: ASCQUER

TM18 4MS2: level N2

All our guardrails systems are CE marked and ISO 9001 certified since the 21st of December 2009

Pressure-treated wood with chromium and arsenic-free preservatives

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TM40

Mixed Wood & Steel Guardrails TM40

Containment Level H2 Severity Index ASI A

A wood & steel safety barrier
for Heavy Goods Vehicles

- Containment level H2
- Working Width W5, Post spacing : 2 m
- Severity Class A
- CE Certified
- Quick & Easy installation
- Cost effective

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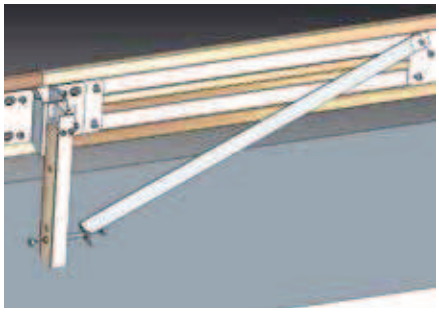
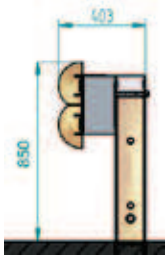
Mixed Wood & Steel Guardrails TM40

2 x 22 cm Round log, 4 or 2 m length reinforced with a U profile steel on the back.

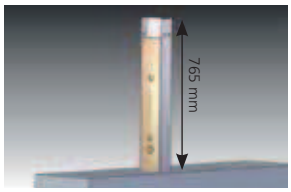


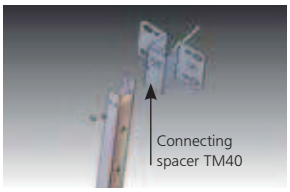
IPE 140 post with wooden cladding and steel spacer
Simplified assembly
Tensioner system

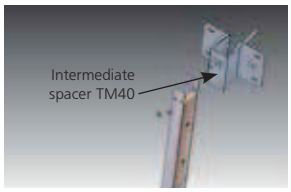


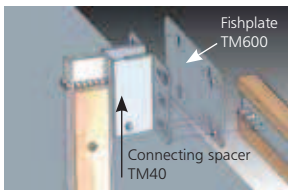
Side view

▶ Assembly





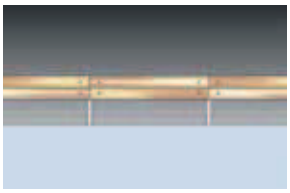




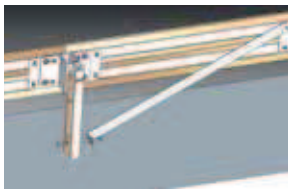
Installation of intermediary beam

Installation of the superior beam

Installation of superior intermediary beam



Front view



Tensioner system

▶ Testing conditions

Containment level	Crash test criteria				Kinetic energy Kj	recommanded level of use
	Test	Speed of impact Kph	Angle of impact °	Total weight of vehicule Kg		
H2	TB 51	70 Km/h	20°	13000 Kg	287,6 Kj	High containment
	TB 11	100 Km/h	20°	900 Kg	40,6 Kj	

▶ Performances

Model	Working width W	Dynamic deflection Dm	Vehicle intrusion	Severity class
TM40 4MS2	W5 (1,60 m)	Dm (1,50 m)	V_{IN} = 1,70 m (VI5)	A (ASI ≤ 1.0)

▶ Standards

All our guardrails have been tested in accordance with the requirements of standards EN 1317 1-2-5.

TM40 4MS2 :
Containment level N2
CE n°1826 CPR 09 02 06 DR10

Notified body : ASCQUER

All our guardrails are ISO 9001 certified and CE marked since december 21, 2009

Pressure-treated wood with chromium and arsenic-free preservatives

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T22

T22 wood & steel guardrails

An efficient model at a reasonable price

The most competitive wooden guardrail
of the market in terms of price and performances

- An environmental friendly wood & steel safety barrier protecting road users
- Suitable where available space for a proper installation is limited
- CE certified
- Quick'n easy installation

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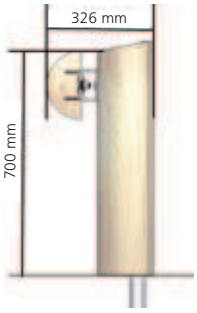
T22 wood & steel guardrails

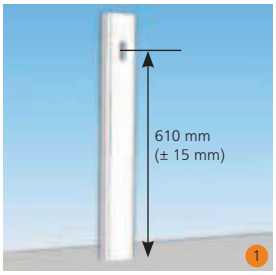
Half round log diameter 22 cm, length 4.00 m or 2.00 m backed with a steel U profile.

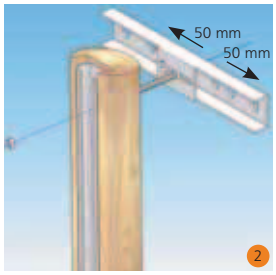
Steel post C 100 in 2.00 m with customized wooden spacer.

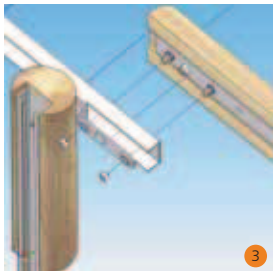


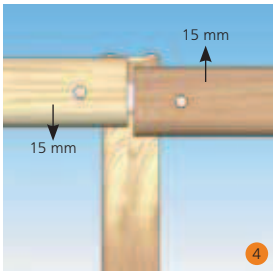
Post side view

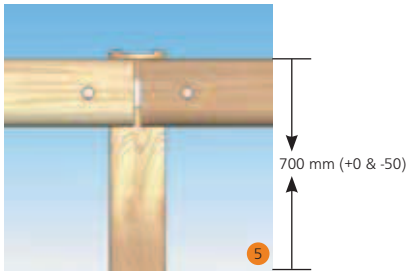
Assembly











Testing conditions

Containment level	Crash test criteria				Kinetic energy Kj	Recommended level of use
	Test	Speed of impact Kph	Angle of impact °	Total weight of vehicule Kg		
N2	TB 32	110 Kph	20°	1500 Kg	81,9 Kj	Normal containment
N2	TB 11	100 Kph	20°	900 Kg	40,6 Kj	Normal containment

Performances

Model	Working width W	Dynamic deflection Dm	Severity class
T22 4M	W6 (1,90 m)	(1,80 m)	A (ASI ≤ 1.0)
T22 4MS2	W4 (1,30 m)	(1,00 m)	A (ASI ≤ 1.0)

Standards

All our guardrails have been tested in accordance with the requirements of standards EN 1317 1-2-5.

T22 4M:
containment level N2
CE n° 1826 CPD 09 02 06 DR5

T22 4MS2:
containment level N2
CE certificate pending

Notified body: ASCQUER

All our guardrails are ISO 9001 certified and CE marked since December 21, 2009

Pressure-treated wood with chromium and arsenic-free preservatives

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TR18

TR18 Wood & Steel guardrail

A great classic in surfaced version.

An environmental friendly wood & steel safety barrier protecting road users

- **Containment level N2**
- **Working width W7, post spacing 4m**
- **Working width W5, post spacing 2m**
- **CE certified**
- **Quick & easy installation**

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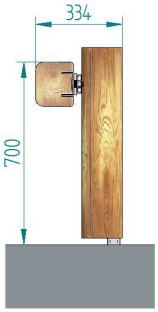
Glissière bois-métal TR18

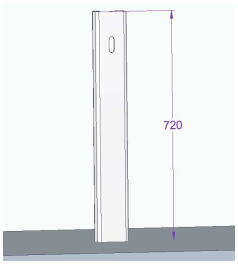
Squared & surfaced sections 170x145, 4m or 2m length, reinforced with a steel U profile on the back.

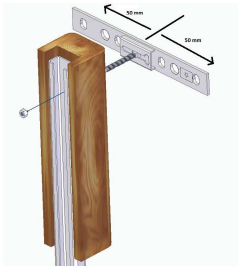
Steel post C100 in 2.00m with customized wooden spacer

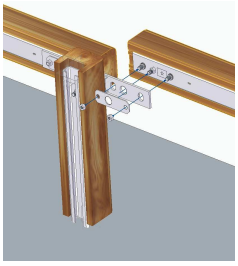


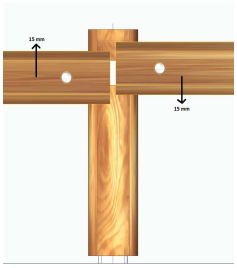
Post side view

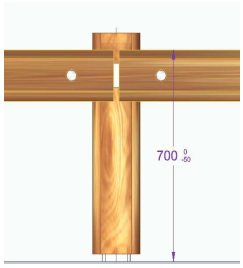
Assembly











Testing conditions

Containment level	Crash test criteria				Kinetic energy	Recommended level of use
	Test	Speed of impact Kph	Angle of impact °	Total weight of véhicule Kg		
N2	TB 32	110 Kph	20°	1500 Kg	81,9 kJ	Normal containment
N2	TB 11	100 Kph	20°	900 Kg	40,6 kJ	Normal containment

Performances

Model	Working width W	Dynamic deflection Dm	Severity class
TR18 4M	W7 (2.50m)	Dm (2,40m)	A (ASI ≤ 1.0)
TR18 4MS2	W5 (1.70m)	Dm (1,50m)	A (ASI ≤ 1.0)

Standards

All our guardrails have been tested in accordance with the requirements of standards
EN 1317 1-2-5.

TR18 4M :
containment level N2
CE n° 1826 CPD 090206 DR12

TR18 4MS2 :
containment level N2
CE n° 1826 CPR 090206 DR11

Notified body :
ASCQUER

All our guardrails are ISO 9001 and CE marked since December 21, 2009

Pressure-treated wood with chromium and arsenic-free preservatives.

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FRANCE

T18

T18 wood & steel guardrails

A great classic in service throughout the world

An environmental friendly wood & steel safety barrier protecting road users

- **An internationally approved model with more than 3500 km installed around the world**
- **CE certified**
- **Quick'n easy installation**

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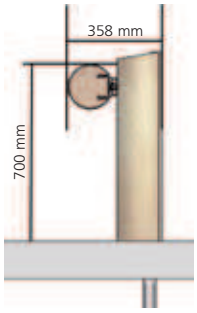
roads and sites worldwide

T18 wood & steel guardrails

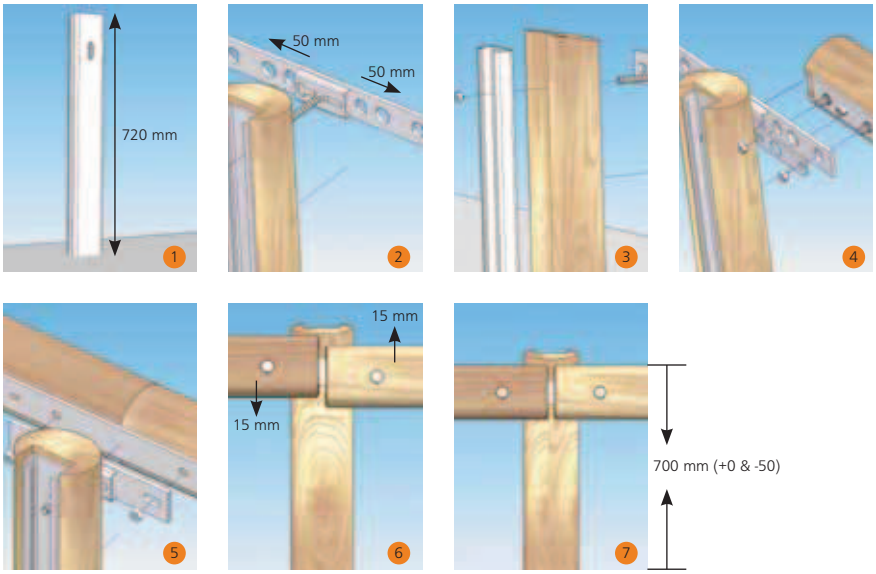
Round log diameter 18 cm, length 4.00 m or 2.00 m backed with a steel U profile

Steel post C 100 in 2.00 m with customized wooden spacer



Post side view

Assembly



Testing conditions

Containment level	Crash test criteria				Kinetic energy Kj	Recommended level of use
	Test	Speed of impact Kph	Angle of impact °	Total weight of vehicule Kg		
N2	TB 32	110 Kph	20°	1500 Kg	81,9 Kj	Normal containment
N2	TB 11	100 Kph	20°	900 Kg	40,6 Kj	Normal containment

Performances

Model	Working width W	Dynamic deflection Dm	Severity class
T18 4M	W7 (2,30 m)	(2,30 m)	A (ASI ≤ 1.0)
T18 4MS2	W5 (1,70 m)	(1,50 m)	A (ASI ≤ 1.0)

Standards

All our guardrails have been tested in accordance with the requirements of standards EN 1317 1-2-5.

T18 4M:
containment level N2
CE n° 1826 CPD 09 02 06 DR4

T18 4MS2:
containment level N2
CE n° 1826 CPD 09 02 06 DR3

Notified body: ASCQUER

All our guardrails are ISO 9001 certified and CE marked since December 21, 2009

Pressure-treated wood with chromium and arsenic-free preservatives

Photos TERTU - Maquette J. SOURD - IMPRIMERIE CAEN REPRO © 02 31 95 27 66 - February 2014

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T40 BP

T40 BP wood & steel guardrails

A containment level H2 for bridges

Wood & steel safety barrier
for heavy vehicles

- Suitable for installation on bridges or concrete girders
- High performance offering containment level H2
- CE certified
- Quick'n easy installation, 2 m post spacing

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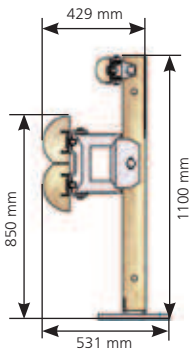
T40 BP wood & steel guardrails

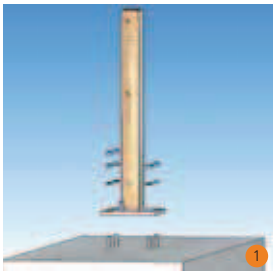
Two half round log diameter 22 cm, length 4.00 m backed with a steel U profile

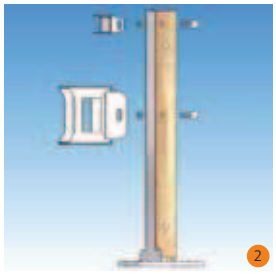
Handrail with half round log diameter 12 cm in 4.00 length - Steel post HEA 100 on steel base

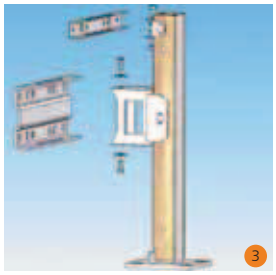


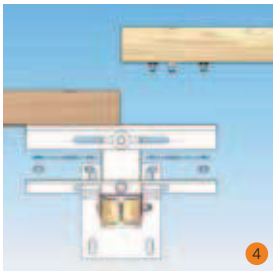
Post side view

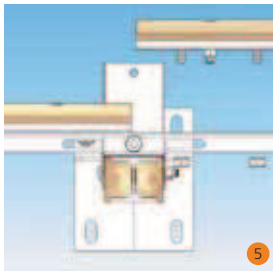
▶ Assembly

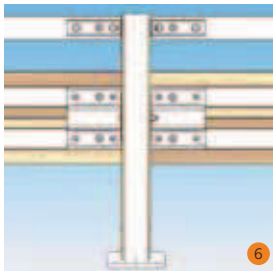












▶ Testing conditions

Containment level	Crash test criteria				Kinetic energy Kj	Recommended level of use
	Test	Speed of impact Kph	Angle of impact °	Total weight of vehicule Kg		
H2	TB 51	70 Km/h	20°	13000 Kg	287,6 Kj	High containment
	TB 11	100 Km/h	20°	900 Kg	40,6 Kj	Normal containment

▶ Performances

Model	Working width W	Dynamic deflection Dm	Severity class
T40 Bridge parapet	W5 (1,50 m)	(1,30 m)	B (ASI ≤ 1.1)

▶ Standards

All our guardrails have been tested in accordance with the requirements of standards EN 1317 1-2-5.

T40 Bridge parapet:
containment level H2
CE n° 1826 CPR 09 02 06 DR2

Notified body: ASCQUER

All our guardrails are ISO 9001 certified and CE marked since December 21, 2009

Pressure-treated wood with chromium and arsenic-free preservatives

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T40

T40 wood & steel guardrails

A higher containment level

A wood & steel safety barrier for heavy vehicles

- **The only wooden guardrail in Europe tested at containment level L2 (H2 + N2)**
- **High performance offering containment criteria for both Heavy Goods Vehicles - H2 & private cars - N2**
- **Low deflection in front of obstacles & severe level differences**
- **CE certified**
- **Quick'n easy installation**

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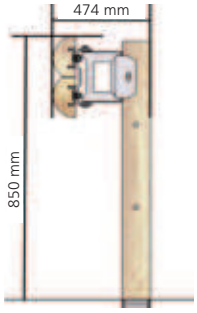
T40 wood & steel guardrails

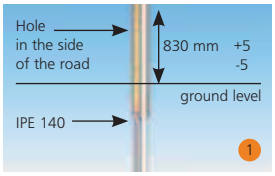
Two half round log diameter 22 cm, length 4.00 m or 2.00 m backed with a steel U profile

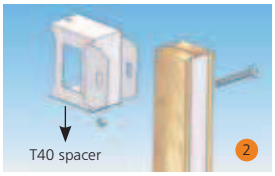
Steel post IPE 140 covered with wood connected to a steel spacer

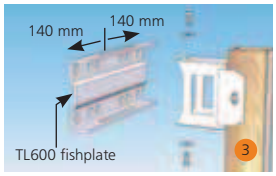


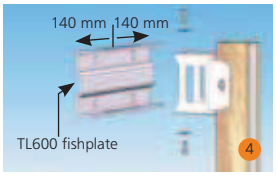
Post side view

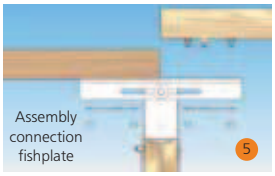
Assembly

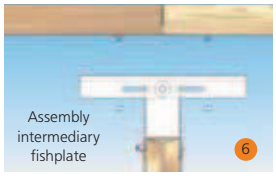


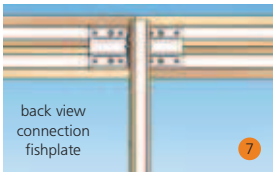


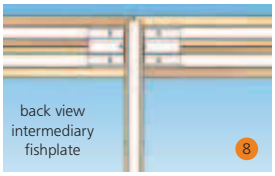












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H2	TB 51	70 Kph	20°	13000 Kg	287,6 Kj	High containment
N2	TB 32	110 Kph	20°	1500 Kg	81,9 Kj	Normal containment
N2	TB 11	100 Kph	20°	900 Kg	40,6 Kj	Normal containment

Performances

Model	Working width W	Dynamic deflection Dm	Severity class
T40 4MS2	H2 = W4 (1,20 m)	(0,80 m)	B (ASI ≤ 1.4)
T40 4MS2	N2 = W3 (1,00 m)	(0,50 m)	B (ASI ≤ 1.4)

Standards

All our guardrails have been tested in accordance with the requirements of standards EN 1317 1-2-5.

T40 4MS2:
containment level H2 & N2
CE n° 1826 CPR 09 02 06 DR1

Notified body: ASCQUER

All our guardrails are ISO 9001 certified and CE marked since December 21, 2009

Pressure-treated wood with chromium and arsenic-free preservatives

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Accessories for guardrails

▶ Connection to walls or concrete barriers

The wood & steel guardrail is bolted to the wall or the concrete barrier

▶ Connection T40 to W beam

Steel device connecting the wood & steel T40 barrier with a standard W beam

▶ Expertise

An international expertise

In the course of its international development, Tertu does frequently face particular situations needed an appropriate treatment.

This priceless experience has strengthened its expertise and its capacity of innovation.

Pressure treated wood with chromium and arsenic-free preservatives

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Accessories for guardrails

Additional safety devices

Technical solutions adapted to installation conditions

- ▶ Secured solutions
- ▶ Technical solutions
- ▶ Inter product connections

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Accessories for guardrails

Our range of accessories has been developed over the last few years often according to our customers suggestions; an evidence of our commitment to offer a large choice of solutions adapted to most situations.

▶ Motocyclist protections TM18 - T18 T22 - T40BP

A tested protection device complying with French regulations. Panel fitting all our guardrail systems and post spacing (2 or 4 m).

Standard powder coated panel (RAL 7008) ; height 37 cm , length 4.32 m with model T connection to post and terminal type U : H 37 cm - L 40 cm

▶ Reflec'bois for TM18 - T18 - T22 - T40 - T40BP

Especially designed by Tertu, this diameter 8 cm round log does fit perfectly our barriers.
With its class II retro-reflective strip (French standard) placed on an aluminum base, it is a highly effective signage product.

▶ Handrail extension for TM18 - T18 - T22 - T40BP

Powder coated steel device adaptable to all our wood & steel guardrails ; with two off-set arms placed on fishplates hardware and a steel hoop to accommodate the 12 cm diameter half round wooden handrail.

▶ T.A.T. transition for TM18 - T18 - T22

T.A.T. transition for TM18 - T18 - T22 to W beams and Euro ET end terminals.
Make possible transition between wood & steel and adaptation to steel connections for bridges approach.
Crash tested according to ENV 1317-4

▶ Connection to walls for TM18 - T18 - T22

A steel device designed to connect our wood & steel guardrails TM18, T 18 & T 22 to all concrete walls.
Pre-assembled component including 1 m long guardrail, powder coated end piece bolted to the wall, wooden spacer and standard fishplate TL 62

▶ Wooden cladding TM18 - T18 - T22

The C post planed wooden cover does slide inside post wings, giving to the spacer + post unit the appearance of a complete diameter 18 cm round log.
An anti-vandalism especially design fastening item is available upon request.

A steel U-profile wood covering is available for our TM18, T18 and T22 models.
It is designed to cover the steel reinforcement, which is pre-drilled for securing wooden pieces of 4 m and 2 m in length using screws.

Optimized solutions

With adapted answers, appropriate prices and user friendly solutions the Tertu technical support & assistance does respond to 100% of your needs.

Expertise

rtu range of products is dedicated to Roads and Sites equipment around the world. Tertu has the ability to put its expertise, its reactivity and its team spirit for big projects, always keeping in mind people safety while respecting the environment.

"Home-made" solutions and products exclusively distributed by Tertu are in accordance with current national or European standards. Tertu always proposes complete and original technical solutions.

An international network

Tertu is a French company based in Normandy and an active member of a Road Industry related to an international network.

A favorable situation which does help Tertu to look for new business opportunities necessary to its continuous development.

Contact us by phone:
+33 2 33 36 11 02
Or through our website:
www.tertu.com

Douglas fir: the specie with a big heart

On account of its structure, the Douglas fir is a natural choice as it is an exceptional material in terms of quality and natural durability. Its heart is deemed to be rot-proof. By 2015, France will have the largest Douglas fir resource in the world. A leader in the use of the Douglas fir since the 1980s, Tertu has continued to develop, using this specie in increasingly sophisticated applications: guardrails, sound barriers and protections, gangways, bridges and other crossings.

Pressure-treated wood with chromium and arsenic-free preservatives

Photos TERTU - Maquette J. SOURD - IMPRIMERIE CAEN REPRO 02 31 95 27 66 - Mars 2013

Sites

Enhancement & links

Wood or Mixed Wood & Steel solutions that fit into your projects and adapt to your budget

Controlled design that reduces installation time

A structure design in accordance with the Eurocode requirements

Pedestrian parapet solutions in accordance with the norm requirements "Pedestrian parapets for Bridges XP P98-405"

Projects validated with calculation notes

Easy to install

Tailor made solutions

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Integrated solutions for laying out your spaces

Acoustic barriers

Tertu provides absorbing or reflecting barriers depending on the site characteristics.

Every Tertu acoustic barrier is CE marked and responds to the EN 1793 norms.

Fences

Tertu has a very wide range of fences to fit your needs and insure economic solutions.

Equipment for roads and car parks

Equipment for roads and car parks are designed for complete proposals of laying outs, markings and protections.

Pedestrian parapets

Tertu pedestrian parapets are solutions to protect pedestrians tested according to French standards XP P98-405 & NF P01-013.

Solid wood or Mixed Wood & Steel gangways, pathways and access for Persons with Reduced Mobility

Solid Wood gangways

Tertu solid wood gangways are made with big diameter logs for a span up to 8 m. Non slip flooring.
For pedestrians.

Decking and Stilts

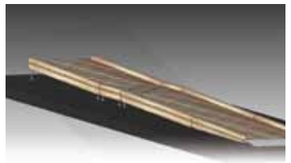
Tertu decking and pontoons can be installed on the ground or on stilts. The maximum support spacing can be up to 4 m. Non slip flooring.

Mixed Wood & Steel gangways

Tertu Mixed Wood & Steel gangways are wooden cladded steel structure, their span can be up to 50 m. Non slip flooring.
For pedestrians and/or small vehicles.

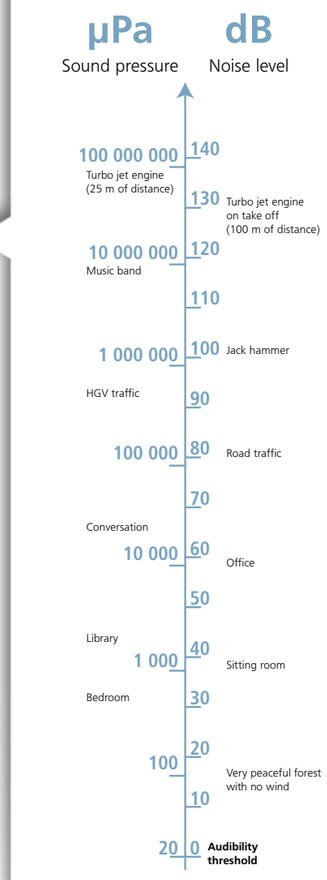
Access for Persons with Reduced Mobility

Tertu wooden ramps are designed according to the regulations for Persons with reduced Mobility. Slopes from 2 to 8% with intermediary stages depending on the available installation space. Adjustable jack feets for a quick, easy and accurate installation. Rise up to 0.70 m in a standard version.



Reflecting screens

Compared to all other sound barrier systems consuming CO2 during their production process, the ecologic balance of a timber panel which does store CO2 is significantly more eco-friendly. Not to mention that all wooden pressure treated components are 100% recyclable, an additional contribution to a better quality of life.



Wood pressure treated with arsenic and chromium preservatives

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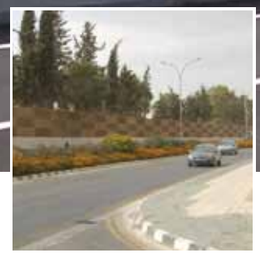

Reflecting screens

Efficient and Eco friendly

Road noises reduced
to improve people well-being

- The warmth of the wood material is combined with acoustics performance tested according to European standards
- Natural storage of CO^2
- Low size compared to other systems
- The lightness/performance ratio does considerably reduce the costs of structures and foundations
- Very easy to install
- CE marked

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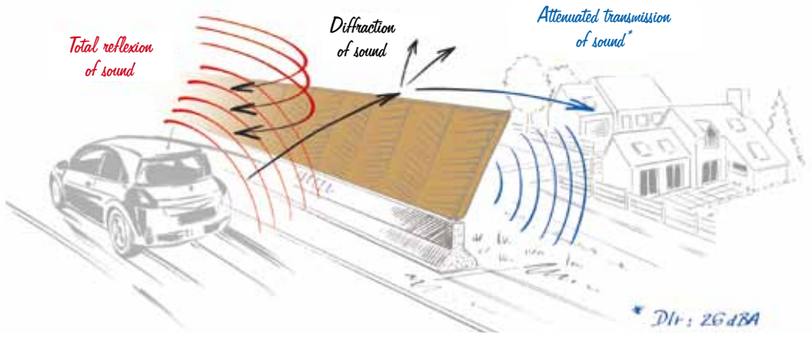
Reflecting screens

All TERTU wooden screens have been tested according to standard EN 1793 by the Laboratoire Européen d'Essais Acoustiques du CSTB (European laboratory for acoustic testing), France.
In order to guarantee on-site the compliance with the performance achieved in the laboratory, it is essential to follow the assembly procedure described in the manual provided with the goods.

Member of the AREBOIS professional association.

▶ Technical description

The reflective screens come in standard modules of 4.00 m in length for a height of 1.00 m. These modules are stacked to obtain heights of 2.00 m, 3.00 m and 4.00 m. The panels are covered with 1/2 logs, diameter 120 mm positioned alternately at 45° right / left. They slide into HEA type galvanized steel posts, the size of which depends on the height of the panel and the conditions of snow and wind in the considered region.

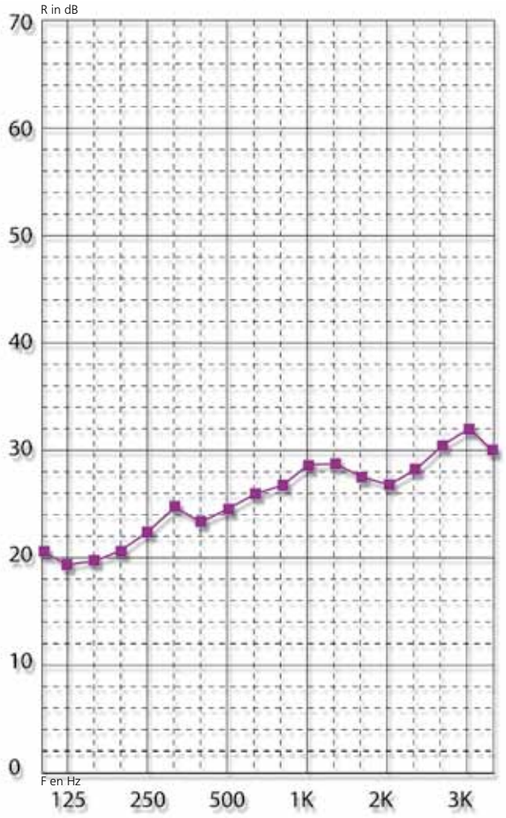


Reflective screens tested according to standard EN 1793

Back view

Front view

▶ Insulation against aerial noise DL_R



f	R
100	20,5
125	19,4
160	19,8
200	20,6
250	22,4
315	24,8
400	23,4
500	24,6
630	26,0
800	26,8
1000	28,6
1250	28,7
1600	27,6
2000	26,9
2500	28,3
3150	30,6
4000	32,1
5000	30,2
Hz	**dB**

DL_R = 26 dBA*

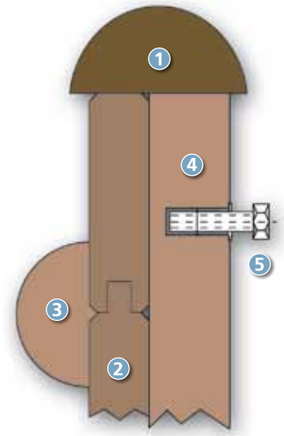
Category DL_R in dB

B0	B1	B2	B3
ND	<15	15 à 24	>24

Classification **B3**

*These results have been obtained in laboratory. They are intrinsic data relative to the acoustic panel itself and do not provide its efficiency level that depends on the panel height, the distance from the noise, etc. The efficiency level of the acoustic panel on site has to be determined by an acoustic study which will specify the height and the lay-out of the panels for a required result.

▶ Block diagram

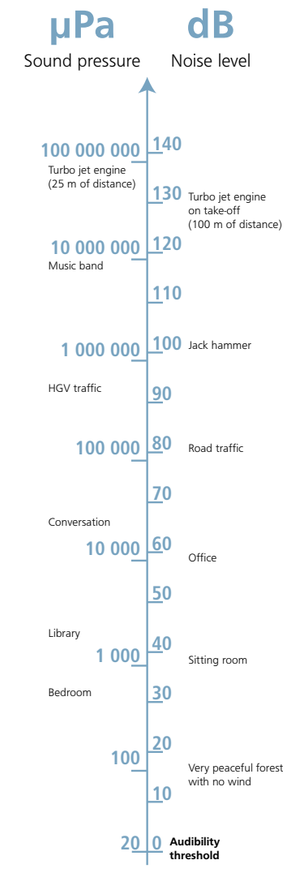


1. Ridge piece: 1/2 round log, diameter 160 mm
2. Tongue and groove board
3. Decoration: 1/2 round log, diameter 120 mm
4. Stiffener
5. Clamping screw

Absorbing screen

Compared to all other sound barrier systems consuming CO2 during their production process, the ecologic balance of a timber panel which does store CO2 is significantly more eco-friendly.

Not to mention that all wooden pressure treated components are 100% recyclable, an additional contribution to a better quality of life



Wood pressure treated with arsenic and chromium preservatives

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Absorbing screens

Efficient and Eco friendly

Road noises reduced to improve people well-being

- The warmth of the wood material is combined with acoustics performance tested according to European standards
- Natural storage of CO^2
- Low size compared to other systems
- The lightness/performance ratio does considerably reduce the costs of structures and foundations
- Very easy to install
- CE marked
- Environmental Product Declaration sheet (EPD's) available

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routes et sites autour du monde

Absorbing screen

All TERTU wooden screens have been tested according to standard EN 1793 by the Laboratoire Européen d'Essais Acoustiques du CSTB (European laboratory for acoustic testing), France. In order to guarantee on-site the compliance with the performance achieved in the laboratory, it is essential to follow the assembly procedure described in the manual provided with the goods.

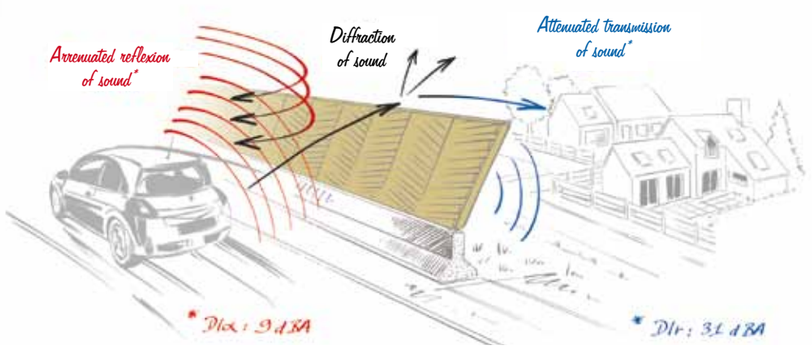
Member of the AREBOIS professional association.

Acoustic screens present Environmental Product Declaration (EPD's) established according to the French standard NF EN 15804

▶ Technical description

Absorbing barriers come in standard modules of 4.00 m in length for a height of 1.00 m. These modules are stacked to obtain heights of 2.00 m, 3.00 m and 4.00 m. The panels are covered in open latticework on the traffic side and positioned alternately at 45° right/left, and with planed boards arranged vertically on the resident side.

The panels slide into HEA-type galvanized steel posts, the size of which depends on the height of the panel and the «snow-wind" properties of the considered region.

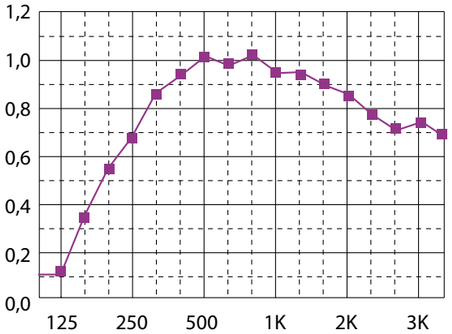


Absorbing screens tested according to EN 1793

Back view

Front view

▶ Acoustic absorption DLα



f	α_s
100	0,11
125	0,12
160	0,34
200	0,54
250	0,67
315	0,85
400	0,94
500	1,01
630	0,98
800	1,02
1000	0,95
1250	0,94
1600	0,90
2000	0,85
2500	0,77
3150	0,71
4000	0,74
5000	0,69
Hz	

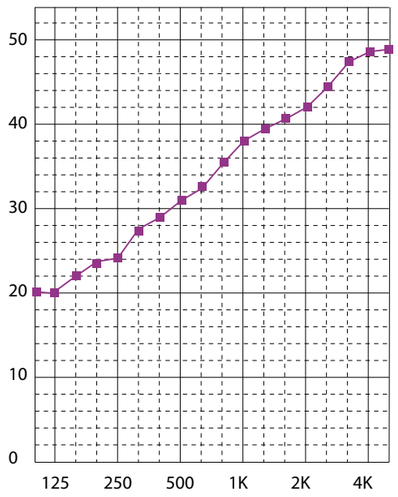
A4	A3	A2	A1	A0
>12	8-11	4-7	<4	non testé

DLα = 9 dBA*

Classification DL ALPHA

Category **A3**

▶ Insulation against aerial noises DLR



f	R
100	20,1
125	20,0
160	21,8
200	23,4
250	24,1
315	27,4
400	29,2
500	31,0
630	32,4
800	35,5
1000	38,1
1250	39,4
1600	40,6
2000	42,0
2500	44,8
3150	47,4
4000	48,7
5000	48,9
Hz	**dB**

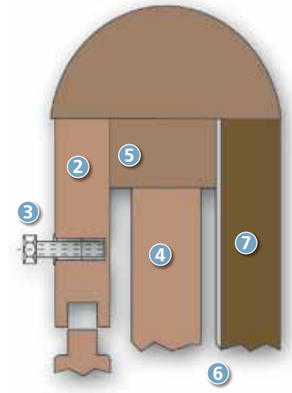
DLR = 31 dBA*

Classification DLR in dB

B0	B1	B2	B3
>12	8-11	4-7	<4

Category **B3**

▶ Block diagram

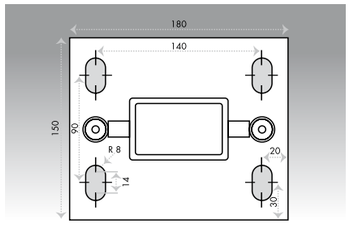


1. Ridge piece: 1/2 round log, Ø 160 mm
2. Tongue and groove board 40 x 200 mm
3. Clamping screw
4. Rock wool panel (500 mm, density 70 kg/m)
5. Air gap: 15 mm
6. Plastic netting for protection against birds and rodents
7. Cladding: trapezoid lathes

*These results have been obtained in laboratory. They are intrinsic data relative to the acoustic panel itself and do not provide its efficiency level that depends on the panel height, the distance from the noise, etc. The efficiency level of the acoustic panel on site has to be determined by an acoustic study which will specify the height and the lay-out of the panels for a required result.

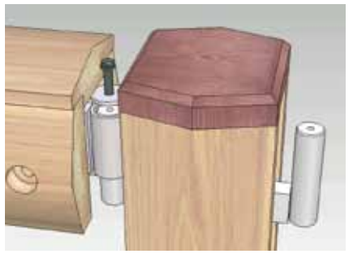
Pedestrian parapets

▶ Steel base details



Post steel base

▶ Locking system



"Panel to post" locking system

▶ Static loads

Pedestrian parapet on bridges - Test reports available upon request.

T100	T140	T100H
1 Uniform, normal & horizontal Tested q1 = 2740 N per M (XP98405: max 2500 N per M)	1 Uniform, normal & horizontal Tested q1 = 2140 N per M (XP98405: max 2500 N per M)	1 Uniform, normal & horizontal Tested q1 = 2400 N per M (XP98405: max 2500 N per M)
2 q2 uniform & vertical Tested q2 = 1000 N per M (XP98405: 1000 N per M)	2 q2 uniform & vertical Tested q2 = 1000 N per M (XP98405: 1000 N per M)	2 q2 uniform & vertical Tested q2 = 1000 N per M (XP98405: 1000 N per M)
3 q3 focused on any non vertical parapet component Tested q3 = 1000 N (XP98405: 1000 N per M)	3 q3 focused on any non vertical parapet component Tested q3 = 1000 N (XP98405: 1000 N per M)	3 q3 focused on any non vertical parapet component Tested q3 = 1000 N (XP98405: 1000 N per M)
Dynamic loads 4 Tested with: 50 Kg bag/alpha < 65° 0.5 Kg marble: L > 1.75 h Acceptable pavement width: 4.40 m and more	**Dynamic loads** 4 Tested with: 50 Kg bag/alpha < 65° 0.5 Kg marble: L > 1.75 h Acceptable pavement width: 3.28 m and more	**Dynamic loads** 4 Tested with: 50 Kg bag/alpha < 65° 0.5 Kg marble: L > 1.75 h Acceptable pavement width: 3.80 m and more

Important recommendations for installation:

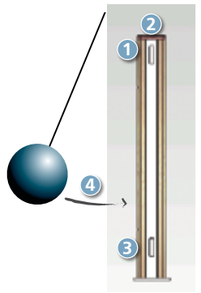
When testing the system, each post has been anchored with 4 mechanical studs Ø 12-120 on concrete base of a compressive strength of 25 Mpa.

These specifications shall be considered as a minimum for the installation.

▶ Standards:

Tested according to the French standards XP P98-405.

Designed according to NF 01-012



Pressure treated wood with chromium and arsenic free preservatives.

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Photos TERTU - Maquette J. SOURD - IMPRIMERIE CAEN REPRO 02 31 95 27 66 - Mars 2013

T100 - T140 - T100H Pedestrian parapets

Tested pedestrian parapets

The mixed wood & steel solution

- **Suitable product for curves and slopes**
- **Convenient solution for terminals ends**
- **Galvanized steel parts**
- **"Quick'n Easy" installation process**
- **Tested according to the French standard XP98-405**

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T100 Pedestrian parapet

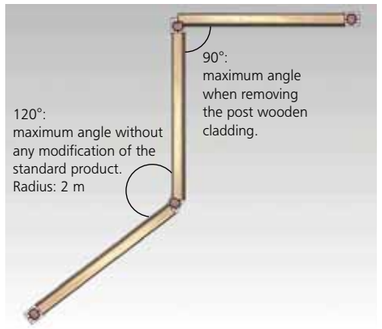
▶ Technical description

Galvanized steel post to be bolted, with wooden cladding.
Wooden panel with vertical barrels.
Connections “panel-post” with galvanized steel parts.
“Panel to post” locking system.

0.10 m ground clearance
2.00 m post spacing
0.10 m barrel spacing
1.03 m above ground height

Acceptable pavement width: 4.40 m and more

▶ Angles



15%: Maximum gradient
without any modification of the standard product.

T140 Pedestrian parapet

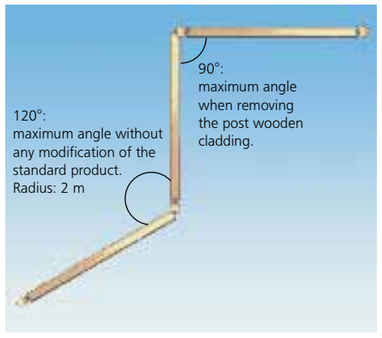
▶ Technical description

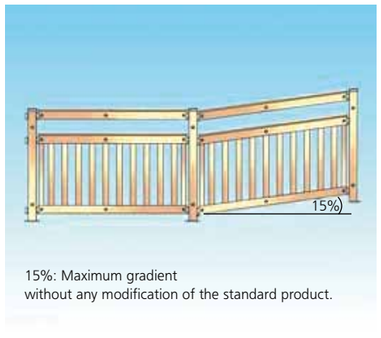
Galvanized steel post to be bolted, with wooden cladding.
Wooden panel with vertical barrels and handrail.
Connections “panel-post” with galvanized steel parts.
“Panel to post” locking system.

2.00 m post spacing
0.10 m ground clearance
0.10 m barrel spacing
1.40 m above ground height with barrels panel above ground height at 1.10 m.

Acceptable pavement width: 3.28 m and more

▶ Angles





15%: Maximum gradient
without any modification of the standard product.

T100H Pedestrian parapet

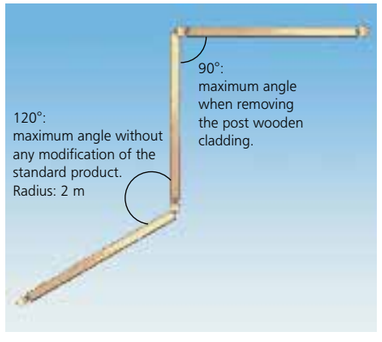
▶ Technical description

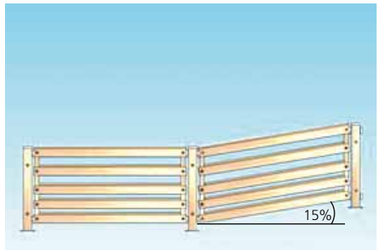
Galvanized steel post on steel base to be bolted, with wooden cladding. Wooden panel with horizontal beams. Connections “panel-post” with galvanized steel parts.

0.10 m ground clearance
2.00m post spacing
Beam-spacing: 45 mm between the 3 lower beams and 95 mm between the 2 upper beams.
1.03 m above ground height

Acceptable pavement width: 3.80 m and more

▶ Angles





15%: Maximum gradient
without any modification of the standard product.

Laying out roads and car parks

▶ Removable lane spacers

Tertu 28-28
Two round logs, Ø 28 cm, length 3.00 m
Block wheel: round log, Ø 14 cm
Mounted on galvanized steel legs
Height above the ground 0.56 m
Galvanized steel connections
Ref: AP 106 - Low

Tertu 28-16
Handrail: round log, Ø 16 cm,
length 2.90 m - Basis: round log, Ø 28 cm,
length: 3.00 m - Block wheels: round log,
Ø 14cm - Mounted on galvanized steel legs
height above the ground 0.75 m
Galvanized steel connections
Ref: AP 107 - High

Tertu Croisillon
Handrail: round log, Ø 16 cm
Basis: round log, Ø 28 cm
Block wheels: round log, Ø 14 cm,
Mounted on galvanized steel legs
Length 3.00 m, width 0.54 m, height 0.75 m
Ref : AP 108

Tertu 28-28 with handrail
Handrail: round log, Ø 16 cm,
Base: 2 round logs, Ø 28 cm,
Block wheel: round log, Ø 14 cm,
Mounted on galvanized steel legs
Length 3.00 m, width 0.54 m, height 0.75 m
Galvanized steel connections
Ref: AP 109

▶ Standard boundary

Ø 14 cm, length 1.50 m
Rethioflex: green, red or white

- *Fixed: Ref: AP 105*
- *Removable with sleeve: Ref: AP 104*

▶ Boundary diameter 28

Round log diameter 28 cm, length 1.40 m,
above ground 0.95 m
Galvanized cap and binding

- *Fixed: Ref: AP 105 G*
- *Removable with steel socket: Ref: AP 105 H*

▶ Safety 75 - Safety 110

C100 Steel post, 1.50 m or 2.00 m,
wooden spacer diameter 18 cm in 0.75 m
or 1.10 m, rear wooden cover
Height above ground 0.75 m or 1.10 m
Ref: AP 105 S

The wooden ecological balance is clearly favorable compared to other materials used for the same purpose with equivalent mechanical properties.

Pressure-treated wood
Chromium and arsenic-free preservatives

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Photos TERTU - Maquette J. SOURD - IMPRIMERIE CAEN REPRO 02 31 95 27 66 - Mars 2013

Laying out roads and car parks

Directing and Securing

Controlling and orienting the flow of vehicles whilst protecting pedestrians.
Isolating the flow of pedestrians from vehicles and ensuring the safety of both

- **Efficient solutions**
- **The frequent use of mixed wood & steel posts in our products makes the adjustment and replacement easy**
- **In most cases, our solutions can be used in any side of the road with maximum safety**

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routes et sites autour du monde

Laying out roads and car parks

Even after being treated, wood remains a living material which works with variations in temperature and humidity.

Cracks may appear; this is a natural phenomenon which does not affect the quality of the product. They should be accepted as inherent to the characteristics of the material.

Swinging gate Ø 28

Bar Ø 14 cm - Post Ø 28 cm,
Galvanized cap
Height of rail above ground: 1.10 m
Passage up to 3.50 m
Sleeve on steel base
Option: reception post with sleeve or reception post to seal
Ref: BV 100

Mixed swinging gate

Round beam 12 cm - Round pivot Ø 14 cm
Assembly with sleeves
Round support post 16cm
Reception post round Ø 14 cm
Passage up to 4.00 m
Height of rail above ground: 1.10 m
Anti-jimmying system
Ref: BV 108

Sliding safety barrier

Log Ø 18 cm in 4.00 m with mounted steel U section (guardrail component)
Posts : 6 C100 posts in 2.00 m, 6 wooden spacers Ø 18 cm in 0.85 m, 6 wooden covers
Height of rail above ground : 0.73m
Width of passage: 3.80 m
Locking system by captive screw
Ref: BV 105

Standard sliding barrier

Bar Ø 12 cm
Post Ø 14 cm,
Height of rail above ground: 1.10 m
Passage up to 5.00 m
Options: reception posts (open position)

Ref: BV 103

Safety gauge

Two mixed wood & steel posts Ø 18 cm to be sealed.
One horizontal round rail Ø 14 cm reinforced with a steel tube, opening from the middle of the tube
For a minimum height of 2.25 m,
Maximum width 4.30 m.
For a maximum height of 3.00 m,
Maximum width 5.80 m.
Ref: AP 103 S

Car park railing

Round beam Ø 16 cm, length 4.00 m
Connection fishplate and hardware
Galvanized steel post + wooden spacer
Steel post C 100, length 1.50 m, wooden spacer, length 0.75 m
Ref: AP 101 A – Spacer without C100
Ref: AG 103 – Post Wooden Cover + Anti Vandalism Fastening

Lavandou railing

Round beam, Ø 14 cm, length 2.50 m or Ø 16 cm, length 4.00 m Connection fishplate. For Lavandou Ø 16 cm: galvanized steel post C100 and wooden spacer height above the ground 0.96m. For Lavandou, Ø 14cm or 16cm: round wooden post, length 1.50m above the ground 0.94m or 0.96m.
Ref: CV 103-1, CV 103-2, CV 103-4, CV 103-5,: CV 103-6
Option: Réf : AG 103 - C100 wooden cladding + fixing

Pays d'Auge railing

Round beam, Ø 8 cm, length 2.00 m
Square post 120 mm x 120 mm, 1.60 m long, planed
Edges and heads beveled and pre drilled 2 m post spacing, beam height above the ground: 1.00 m to 1.10 m
Ref: CV 200-1 - 1 rail
Ref: CV 200-2 - 2 rails
Ref: CV 200-3 - 1 low rail - 0.50 m height above the ground

Aquitaine railing

Round beam, Ø 8 cm, length 2.00 m, assembled in oblong posts 0.14m x 0.14m
Length 1.60m, planed, rounded edges
2 m post spacing, beam height above the ground: 1.00 m to 1.10 m
Ref: CV 200-1 - 1 rail
Ref: CV 200-2 - 2 rails
Ref: CV 200-3 - 1 low rail - 0.50 m height above the ground

Fencing

Planed posts 120 x 120 mm, length: 1.60 m
Panel of barrels: length 2.00 m, height: 0.93m,
10 barrels 80 mmx 30 mm, planed, to be connected on the posts
One post every 2.00 m, height above the ground barrels 1.03m, height above the ground post 1.03m, ground clearance 0.10 m
Ref: RP 500

Mixed wood & steel products are available with wooden cladding so that the wooden finish be visible from both sides, front and back.

All products for «planting» are available with variants:

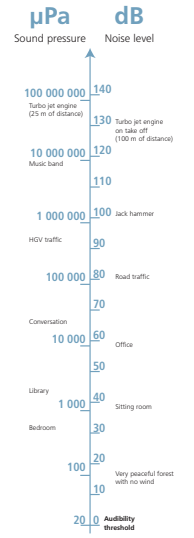
«wood & steel posts»

or

"Steel bases»
for all types of ground.

Reflecting screens

Compared to all other sound barrier systems consuming CO2 during their production process, the ecologic balance of a timber panel which does store CO2 is significantly more eco-friendly. Not to mention that all wooden pressure treated components are 100% recyclable, an additional contribution to a better quality of life.



Wood pressure treated with arsenic and chromium preservatives

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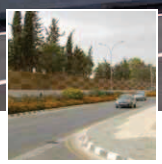
Photo : BERTU - Marquis A. / CARSO - LYON ENTE CARSO/LEDRO 20 15 672 du - Mars 1993



Reflecting screens

Efficient and Eco friendly

Road noises reduced
to improve people well-being

- The warmth of the wood material is combined with acoustics performance tested according to European standards
- Natural storage of CO^2
- Low size compared to other systems
- The lightness/performance ratio does considerably reduce the costs of structures and foundations
- Very easy to install
- CE marked

tertu EQUIPEMENTS
routes et sites autour du monde

▶ Standard EN-1793

Reflecting screens

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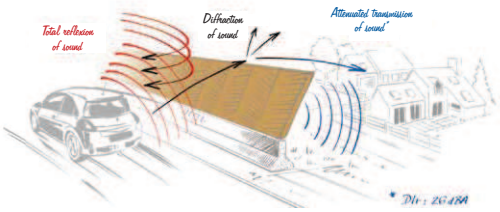
Member of the AREBOIS professional association.

▶ Technical description

The reflective screens come in standard modules of 4.00 m in length for a height of 1.00 m. These modules are stacked to obtain heights of 2.00 m, 3.00 m and 4.00 m. The panels are covered with 1/2 logs, diameter 120 mm positioned alternately at 45° right / left. They slide into HEA type galvanized steel posts, the size of which depends on the height of the panel and the conditions of snow and wind in the considered region.

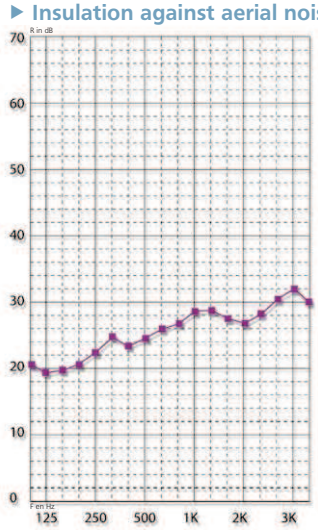


Reflective screens tested according to standard EN 1793

Back view

Front view

▶ Insulation against aerial noise DL_R



f	R
100	20,5
125	19,4
160	19,8
200	20,6
250	22,4
315	24,8
400	23,4
500	24,6
630	26,0
800	26,8
1000	28,6
1250	28,7
1600	27,6
2000	26,9
2500	28,3
3150	30,6
4000	32,1
5000	30,2
Hz	dB

DL_R = 26 dBA*

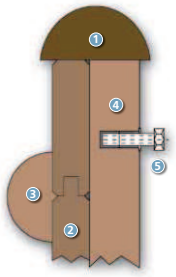
Category DL_R in dB

B0	B1	B2	B3
ND	<15	15 à 24	>24

Classification **B3**

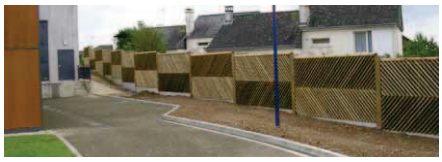
*These results have been obtained in laboratory. They are intrinsic data relative to the acoustic panel itself and do not provide its efficiency level that depends on the panel height, the distance from the noise, etc. The efficiency level of the acoustic panel on site has to be determined by an acoustic study which will specify the height and the lay-out of the panels for a required result.

▶ Block diagram



1. Ridge piece: 1/2 round log, diameter 160 mm
2. Tongue and groove board
3. Decoration: 1/2 round log, diameter 120 mm
4. Stiffener
5. Clamping screw

Absorbing screen



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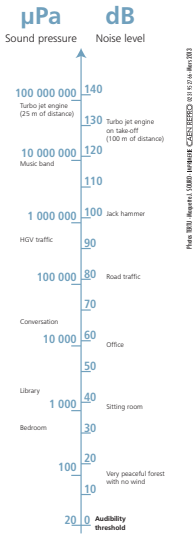

Wood pressure treated with arsenic and chromium preservatives

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Photo : BERU / Maquette : CARS DESIGN

Absorbing screens

Efficient and Eco friendly

Road noises reduced to improve people well-being

- The warmth of the wood material is combined with acoustics performance tested according to European standards
- Natural storage of CO^2
- Low size compared to other systems
- The lightness/performance ratio does considerably reduce the costs of structures and foundations
- Very easy to install
- CE marked
- Environmental Product Declaration sheet (EPD's) available

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▶ Standard EN-1793 — Absorbing screen

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Member of the AREBOIS professional association.

Acoustic screens present Environmental Product Declaration (EPD's) established according to the French standard NF EN 15804

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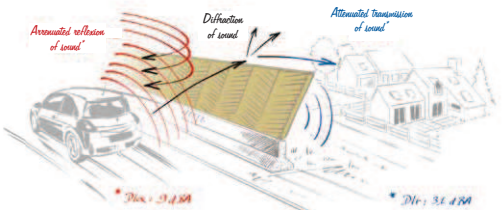
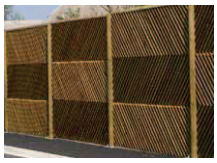
Absorbing barriers come in standard modules of 4.00 m in length for a height of 1.00 m. These modules are stacked to obtain heights of 2.00 m, 3.00 m and 4.00 m. The panels are covered in open latticework on the traffic side and positioned alternately at 45° right/left, and with planed boards arranged vertically on the resident side.

The panels slide into HEA-type galvanized steel posts, the size of which depends on the height of the panel and the «snow-wind" properties of the considered region.



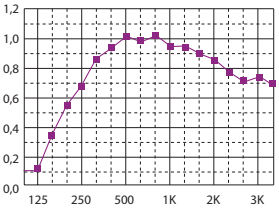
Absorbing screens tested according to EN 1793

Back view



Front view

▶ Acoustic absorption DLα

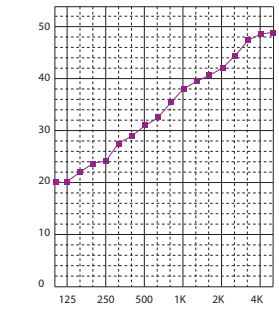


A4	A3	A2	A1	A0
>12	8-11	4-7	<4	non testé

DLα = 9 dBA*
Classification DL ALPHA
Category **A3**

f	αs
100	0,11
125	0,12
160	0,34
200	0,54
250	0,67
315	0,85
400	0,94
500	1,01
630	0,98
800	1,02
1000	0,95
1250	0,94
1600	0,90
2000	0,85
2500	0,77
3150	0,71
4000	0,74
5000	0,69
Hz	

▶ Insulation against aerial noises DLR



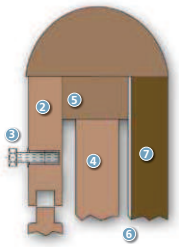
f	R
100	20,1
125	20,0
160	21,8
200	23,4
250	24,1
315	27,4
400	29,2
500	31,0
630	32,4
800	35,5
1000	38,1
1250	39,4
1600	40,6
2000	42,0
2500	44,8
3150	47,4
4000	48,7
5000	48,9
Hz	dB

DLR = 31 dBA*
Classification DLR in dB

B0	B1	B2	B3
>12	8-11	4-7	<4

Category **B3**

▶ Block diagram



1. Ridge piece: 1/2 round log, Ø 160 mm
2. Tongue and groove board 40 x 200 mm
3. Clamping screw
4. Rock wool panel (500 mm, density 70 kg/m)
5. Air gap: 15 mm
6. Plastic netting for protection against birds and rodents
7. Cladding: trapezoid lathes

*These results have been obtained in laboratory. They are intrinsic data relative to the acoustic panel itself and do not provide its efficiency level that depends on the panel height, the distance from the noise, etc. The efficiency level of the acoustic panel on site has to be determined by an acoustic study which will specify the height and the lay-out of the panels for a required result.

Parapets

A suitable safety

Our solutions suit
our customer needs

- Progressive solutions
- Strong & Aesthetically pleasing
- Easy to assemble
  and quick to install

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Parapets

Vervins

Built from our T18 2M or T18 4MS2 mixed wood & steel guardrail, triple railing with C125 post on a steel base.
Height 1 m above ground.

Ref: GC 101

Lot

Built from our T22 2M or T22 4MS2 mixed wood & steel guardrail, 4-height railing with C125 post on a steel base.
Height 1 m above ground.

Ref: GC 110

Reinforced T100 with T18 or reinforced T100 with T22

Tested according to French standard NF P01-013, NF P01-012, meeting norm XP P98- 405 safety requirements. Galvanized steel post on steel base with wooden cladding: 2 m post spacing. Wooden panel with barrels. Panel connected to barrels and post with galvanized steel parts 1.03 m above ground Combined with mixed wood and steel guardrail T18 or T22. Adjustable for cutting and curves and level differences

Ref: GC T100

Fencing

Planed posts 120 mm x 120 mm in 1.60m - Barrel panel: length 2.00 m, height 0.93 m, 10 planed barrels 80 mm x 30 mm, to be screwed on the posts. 2.00 m post spacing, height above ground of the barrels: 1.03 m, height above ground of the post: 1.03 m, ground clearance 0.10 m

Ref: RP 500

Pedestrian parapets T100 - T140 - T100H

Cf individual sheets

Restraint system for pedestrians or other users, installed on the edge of bridges, retaining walls or similar structures...

Pressure-treated wood with chromium and arsenic-free preservatives

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Pedestrian gangways

Moving forward

Designed for pedestrians, cyclists
and even horses

- Easy to install and to maintain
- Light and strong
- Attractive and durable
- Standardized parapets
- Calculation Note according to Eurocodes 3 or 5
- Advices and coordination to complete the project together

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Pedestrian gangways

MIXED WOOD & STEEL

▶ Hirson

Straight mixed wood & steel gangway. Galvanized steel structure, dimensions according to Eurocode 3, wooden cladded. Grooved wooden decking, 36 mm thick. Mixed Wood & Steel Parapets T100 or T140, tested according to the norm XP P98-405. Length from 6 m to 50 m. Delivered assembled up to 12 m. Components to be connected for superior lengths. Passage up to 2.12 m. *Ref: PO 102 A*

▶ Montfort

Curved mixed wood & steel gangway. Curved galvanized steel structure, dimensions according to Eurocode 3, wooden cladded. Grooved wooden decking, 36 mm thick. Mixed Wood & Steel Parapets T100 or T140, tested according to the norm XP P98-405. Span from 12 m. Passage up to 2.12 m. *Ref: PO 102 E*

SOLID WOOD

▶ Camargue

Solid Wood gangway. Structure made of logs of 10 – 12 and 28 cm Ø, dimensions according to Eurocode 5. Grooved wooden decking, 36 mm thick. Mixed Wood & Steel Parapets T100 or T140, tested according to the norm XP P98-405. Span from 9 m. Passage up to 2.12 m. *Ref: PO 101 A*

▶ Eurocodes

Gangways dimensions follow the Eurocode recommendations. Structure calculations are established according to the rules:

- AFNOR P06-113-1 and NA "EN1991-1-3 Eurocode 1 Effects on structures Part 1-3, General Effects – Snow loads" **EC1-1-3** marked
- AFNOR P06-114-1 and NA "EN1991-1-4 Eurocode 1 Actions on structures Part 1-4, General effects Wind Effects" **EC1-1-4** marked
- AFNOR P22-311-1 and NA "EN 1993-1-1 Eurocode 3 Steel structure calculation – Part 1-1, General Rules and rules for the construction industry" **EC3-1-1** marked.

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Gangways for light vehicles

Performing and aesthetically pleasing

All wood or wood & steel gangways,
combining technology and simplicity.

- Easy to install and maintain
- Lighter for the same load bearing capacity
- Standardized parapets
- Calculation notes according to Eurocode 3
- Durability

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Gangways for light vehicles

MIXED WOOD & STEEL

▶ Hirson

Straight mixed wood & steel gangway. Galvanized steel structure, dimensions according to Eurocode 3, wooden cladding. Grooved wooden decking, 50 or 80 mm thick. Mixed Wood & Steel Parapets T100 or T140, tested according to the norm XP P98-405. Length from 6 m to 50 m. Passage up to 2.50 m. Vehicle up to 3.5 T*.

Ref: PO 102 D

▶ Sixt

Straight mixed wood & steel gangway. Galvanized steel structure, dimensions according to Eurocode 3, wooden cladding. Grooved wooden decking, 50 or 80 mm thick. Mixed Wood & Steel Parapets T100 or T140, tested according to the norm XP P98-405, reinforced with a steel backed timber barrier. Length from 6 to 50 m. Passage up to 2.50 m. Vehicle up to 3.5 T*.

Ref: PO 102 C

* *for exploitation structures superior to 3.5T: a study is necessary.*

▶ Eurocode 3

Gangways dimensions follow the Eurocode 3 recommendations. Structure calculations are established according to the rules:

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Deckings - Stilts - Access ramps

Pathways & Access for Reduced Mobility People (RMP)

Pontoons and decking to access beaches, dunes, rivers, lakes and forest paths

- Optimum adaptability to site configuration
- Easy and quick to install
- In accordance with the RMP recommendations

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Deckings - Stilts - Access ramps

DECKINGS

▶ Panels

Made of treated Douglas fir or heart of Douglas fir, grooved planks 36 mm thick, fixed using stainless steel screws to a wooden backing strip.
Width 2.00 m, length 4.00 m,
Total thickness 110 mm
Delivered assembled

Ref: ME 201

▶ Strips

Made of treated Douglas fir or Heart of Douglas fir, non-slip grooved planks

145 mm x 36 mm en 4.00 m
Ref: AM 105

145 mm x 45 mm en 4.00 m
Ref: AM 107

145 mm x 80 mm en 4.00 m
Ref: AM 109

STILTS

One support every 2.00 m made of two posts 120 x 120 mm,
Non-slip grooved planks to be fixed on joists with stainless steel screws every 0.50 m
Width 2.00 m,
Delivered in kit to install on site
Hardwares provided

Ref: PO 104

ACCESS RAMPS for people with reduced mobility

Made of treated Douglas fir or Heart of Douglas fir. 5.00 m modular panels, made of non-slip grooved planks 145 x 36 mm, mounted on joists. Passage width 1.50 m
Space for the wheels: 80 x 80 mm

Galvanized feet equipped with springs to insure an accurate adjustment to the slope.
Rest platforms, length 1.50m for passage width 1.50 with jacks galvanized feet for an accurate adjustment.
Connection of the different elements with galvanized fishplates
Slopes in accordance with the Access Ramps regulations: in general 4% - except in case of exceptional derogations (4% slopes physically impossible) : 5, 7, 8 and 12% with rest platforms depending on the slopes.

Ref: PMR 201

▶ Grooving

The decking planks have 8 non-slip grooves and two drop edges.

They are laid in a minimum gap of 5 mm using screws (stainless steel recommended: pre-drilled holes required)

Pressure-treated wood with chromium and arsenic-free preservatives

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Pedestrian gangways

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- Light & strong
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- Advices & coordination to complete the project together

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Pedestrian gangways

MIXED WOOD & STEEL

Hirson

Straight mixed wood & steel gangway. Galvanized steel structure, dimensions according to Eurocode 3, wooden cladded. Grooved wooden decking, 36 mm thick. Mixed Wood & Steel Parapets T100 or T140, tested according to the norm XP P98-405. Length from 6 m to 50 m. Delivered assembled up to 12 m. Components to be connected for superior lengths. Passage up to 2.12 m. *Ref: PO 102 A*

Montfort

Curved mixed wood & steel gangway. Curved galvanized steel structure, dimensions according to Eurocode 3, wooden cladded. Grooved wooden decking, 36 mm thick. Mixed Wood & Steel Parapets T100 or T140, tested according to the norm XP P98-405. Span from 12 m. Passage up to 2.12 m. *Ref: PO 102 E*

SOLID WOOD

Camargue

Solid Wood gangway. Structure made of logs of 10 – 12 and 28 cm Ø, dimensions according to Eurocode 5. Grooved wooden decking, 36 mm thick. Mixed Wood & Steel Parapets T100 or T140, tested according to the norm XP P98-405. Span from 9 m. Passage up to 2.12 m. *Ref: PO 101 A*

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- AFNOR P22-311-1 and NA "EN 1993-1-1 Eurocode 3 Steel structure calculation – Part 1-1, General Rules and rules for the construction industry" **EC3-1-1** marked.
- EN 1955-1-1 AND 1995-2 Eurocode 5 Conception and calculation for wooden structures. Part 1-1 Standard regulations and regulations for the buildings - 2 Bridges **EC-1-1** and 2 marked

Pressure-treated wood with chromium and arsenic-free preservatives

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- A lighter option for the same loading capacity
- Standardized parapets
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- Durability

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Gangways for light vehicles

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Ref: PO 102 D

▶ Sixt

Straight mixed wood & steel gangway. Galvanized steel structure, dimensions according to Eurocode 3, wooden cladding. Grooved wooden decking, 50 or 80 mm thick. Mixed Wood & Steel Parapets T100 or T140, tested according to the norm XP P98-405, reinforced with a steel backed timber barrier. Length from 6 to 50 m. Passage up to 2.50 m. Vehicle up to 3.5 T*.

Ref: PO 102 C

*** for exploitation structures superior to 3.5 T: a study is necessary.**

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- AFNOR P22-311-1 and NA "EN 1993-1-1 Eurocode 3 Steel structure calculation – Part 1-1, General Rules and rules for the construction industry" **EC3-1-1** marked.

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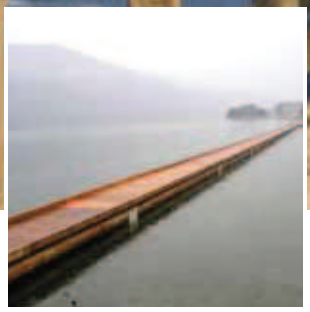

Decking - Stilts - Access ramps

Pathways & Access for Reduced Mobility Persons (RMP)

Pontoons and decking to access beaches, dunes, rivers, lakes and forest paths

- **Optimized adaptability according to sites configuration**
- **Easy & quick to install**
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Deckings - Stilts - Access ramps

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Total thickness 110 mm
Delivered assembled

Ref: ME 201

▶ Strips

Made of treated Douglas fir or Heart of Douglas fir, non-slip grooved planks

145 mm x 36 mm en 4.00 m
Ref: AM 105

145 mm x 45 mm en 4.00 m
Ref: AM 107

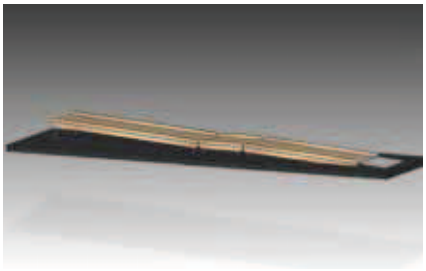
145 mm x 80 mm en 4.00 m
Ref: AM 109

STILTS

One support every 2.00 m made of two posts 120 x 120 mm,
Non-slip grooved planks to be fixed on joists with stainless steel screws every 0.50 m
Width 2.00 m,
Delivered in kit to install on site
Hardwares provided

Ref: PO 104

ACCESS RAMPS for persons with reduced mobility



Made of treated Douglas fir or Heart of Douglas fir. 5.00 m modular panels, made of non-slip grooved planks 145 x 36 mm, mounted on joists. Passage width 1.50 m
Space for the wheels: 80 x 80 mm

Galvanized feet equipped with springs to insure an accurate adjustment to the slope.
Rest platforms, length 1.50 m for passage width 1.50 with jacks galvanized feet for an accurate adjustment.
Connection of the different elements with galvanized fishplates
Slopes in accordance with the Access Ramps regulations: in general 4% - except in case of exceptional derogations (4% slopes physically impossible) : 5, 7, 8 and 12% with rest platforms depending on the slopes.

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▶ Grooving

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They are installed with a minimum gap of 5 mm using screws (stainless steel recommended: pre-drilled holes required)

Pressure-treated wood with chromium and arsenic-free preservatives

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