

Noise barriers 2023



ramo.eco/en

 **ramo**
green barriers

Wood noise barriers

Established in 2006, **Ramo green barriers** is a Québec manufacturing company located in the Lanaudière region. Ramo manufactures noise barriers under licence from Danish company **Pilebyg** and German company **Heinrich Fahlenkamp**.

These **environmental, durable and effective** noise barriers are made of willows, larch, rock wool and steel.

Canadian larch and willows are used to build these noise barriers. The company also manufactures visual screens.

Tens of kilometres are currently installed across Québec, Ontario and the United States.

WHY CHOOSE RAMO GREEN BARRIERS PRODUCTS?

- Superior acoustic performance
- Proven durability
- Competitive price
- Carbon negative or with low carbon footprint
- Distinctive and sleek design
- High social acceptability
- Manufactured in Canada



Licensing

pilebyg

For the past 15 years, Ramo green barriers has manufactured and distributed willow noise barriers across North America under exclusive licence from Danish company **Pilebyg**. The product has been installed in Denmark for nearly **25 years**. These noise barriers are durable, with a distinctive, natural design.



Ramo green barriers also holds an exclusive licence for products of German company **Heinrich Fahlenkamp**. In the past 40 years, this German company, specialized in wood infrastructure design, has produced over **600,000 m² of noise barriers across Europe**. This product provides outstanding durability and features a unique technology that keeps the wood's contact areas at a minimum.



Our noise barriers

The Classic Pilebyg

pilebyg



With its distinctive **Danish design**, the Classic Pilebyg noise barrier combines acoustic performance with carbon negativity thanks to its green and durable infrastructure.

It features a **woven willow facing** and a **one-of-a-kind rock wool acoustic core** that makes this product sound absorbent on either side.

Easily installed, the prefabricated panels are set between two H-posts and covered by a metal cap to extend their life span. A concrete panel can also be set at the barrier's base.

Vines are planted at its base, turning the entire infrastructure green within a few years. This will allow the wall to blend in perfectly with the surrounding landscape and extends its useful life.



- Sleek Danish design
- Green infrastructure that is conducive to climate transition and helps fight heat islands
- Carbon negative product
- Maintenance-free
- Marginally receptive to graffiti
- Prefabricated product
- Quick and easy installation
- Sound absorbing on both sides

Technical information

HEIGHT	SPAN	SURFACE DENSITY	STC (ASTM E413, ASTM E90)	NRC (ASTM C423)
6' / 8' / 10' / 11.5' or customized	5' / 8' or customized	21 kg/m ²	25	0,8



The HF1



The HF1 wood noise barrier meets the highest acoustics standards and offers outstanding durability at a competitive price thanks to its distinctive **German design**.

This larch and rock wool barrier optimizes acoustic principles and brings into play a patented technology that limits the wood's contact areas.

Installation is quick and easy: simply slide the panel between two H-posts.

It is covered by a metal cap and set on a concrete panel to extend its life span.

The product can be vegetated by adding vines at the wall's base.

- Sleek and modern German design
- Competitive price
- Superior acoustic performance
- Proven durability over the past 40 years
- Low carbon footprint
- Maintenance-free
- Prefabricated product
- Quick and easy installation
- Sound-absorbing on one side, sound-reflective on the other

Technical information

HEIGHT	SPAN	SURFACE DENSITY	STC <small>(ASTM E413, ASTM E90)</small>	NRC <small>(ASTM C423)</small>
5' / 7' or customized	12' or customized	over 27 kg/m ²	32	0,8



The Hybrid



The Hybrid is the perfect pairing of **Danish design and German expertise.**

This product features a distinctive design and offers carbon negativity, outstanding durability and superior acoustic performance.

Combining a **woven willow facing, a larch facing and a rock wool acoustic core**, this product is sound-absorbing on one side and sound-reflective on the other.

Installation of the prefabricated panels between two H-posts is simple and straightforward. They are covered by a metal cap and set

on a concrete base to extend their useful life.

Vines are planted at the base of the wall, turning the entire infrastructure green within a few years. This will allow the wall to blend into its natural surroundings and extends its useful life.

- Distinctive design
- Superior acoustic performance
- Carbon negative product
- Maintenance-free
- Prefabricated product
- Quick and easy installation
- Sound-absorbing on one side, sound-reflective on the other

Technical information

HEIGHT	SPAN	SURFACE DENSITY	STC (ASTM E413, ASTM E90)	NRC (ASTM C423)
5' / 7' or customized	12' or customized	over 27 kg/m ²	32	0,8



Durability

Products manufactured by Ramo are well known for their durability: clients have been delighted with their HF1 barriers for some 40 years and, over the last 25 years, with their Pilebyg Classics. And here's why:

Water flow and moisture evacuation

Several design and manufacturing techniques were developed to protect cut surfaces, keep contact areas at a minimum and allow both water and moisture to escape.



Cap

Noise barriers are covered with a steel cap to protect them from the weather, which limits the exposure of cut surfaces and moisture from seeping in the system.



Rock wool

The rock wool used in our noise barriers meets ASTM fire and mould resistance standards.



Geotextile

Geotextile, used when needed, provides the noise barrier with an extra layer of protection. It prevents birds from nesting and rodents an easy access to the structure.



Climbing plants

Climbing plants not only protect the wood from bad weather and UV rays, they can also turn the entire structure green, allow the wall to blend into its natural surroundings and improve the noise barrier's carbon footprint.



Larch

Larch is ranked by the Canadian Wood Council among its category's most durable species, with excellent acoustic properties due to its density. It provides long-term durability, in excess of 40 years, without the need for any kind of treatment.*

* Andreas Bergstedt and Christian Lyck (eds.). Larch wood – a literature review. Forest & Landscape. Working Papers no. 23-2007. Forest & Landscape Denmark



Willow

Debarked willow stems are smooth and show low porosity. Water will not penetrate the stems but flow along their surface. Not only does this ensure their durability, it also provides anti-graffiti properties. This woven willow structure does not require any fasteners and is properly ventilated, extending its life span.



Installation

The noise barriers offered by Ramo green barriers are prefabricated at the Saint-Roch-de-l'Achigan factory. The installation between two H-posts takes just a few minutes. Lifting straps are built into the panels and allow for easy handling.

Also available

Willow

fence

pilebyg

The woven willow fence is Ramo's iconic model. Available panels are 4, 6, 8, 10 and 11.5 feet in height, with a standard length of 5 or 8 feet.

- Maintenance-free
- Distinctive design
- Durability
- Quick installation
- Marginally receptive to graffiti



Ramo green barriers

They put their trust in us



... and many others

“

The noise barrier has been in place for several months now and we're still getting positive feedback. This structure makes an important contribution to this new neighbourhood's landscaping. In fact, as the vegetation gradually grows among the willow stems used to build the barrier, the entire structure will be increasingly visually appealing. Given the quality of the noise barrier we received and the high level of professionalism of the entire Ramo team, I would certainly recommend your company.

”

Marie-Sara Hamel
Vice President, Operation
Groupe Boda

The Candiac TOD de la Gare real estate project. Classic Pilebyg 315 metres (11.5 and 13 feet in height)
Total area of 1,120 m²



Ramo also offers...

... the Evaplant vegetation filter technology which helps treat and valorize wastewater through willow evapotranspiration (landfill leachate, mine wastewater, municipal wastewater, compost wastewater).



... willow plantation and RCW (ramial chipped wood) mulch production for horticultural use or to help restore degraded sites.



OUR TEAM OUR TEAM



Our team is made up of over 40 talented people and professionals who are passionate about their work. Our expertise covers willow culture, noise barrier manufacturing as well as wastewater treatment. Members of our Ramo green barriers division will work with you every step of the way to carry out your noise barrier and fence project.

