



Wooden facades

More and more builders and architects opt for the use and application of wood and wooden constructions. It is very pleasant that terms like „energy saving“ and „ecological construction“ are connected more and more with technologies that come from using wood as the primary construction material.

Living in wood is part of a certain generous and free outlook on life, return to natural values. It evokes feeling of cosy, comfortable and warm environment and this fact is perceived very positively by a person. Wood breathes, ensures pleasant climate and moisture in rooms, acts positively upon the human psyche and immunity system.

Wood is a natural resource, renewable, fully recyclable and with smart farming practically inexhaustible. Wood has excellent heat insulation properties. Shows low heat conductivity and really higher accumulation of heat. Therefore, the structure reacts very quickly to the heat needs even with the use of smaller heating. This brings energy savings and lower running costs of the building.

Wood as a natural material offers creative and technological options that can be implemented with other materials only with great difficulty. This brochure about REAL FACADE profiles presents information about wooden facade profiles that our company Au-Mex deals with for over 20 years. Optically the main difference is in sheathing or in the used type of facade profile and in the direction of installation.

Main requirements for facade construction are:

Architectonic solution – the architect suggests the correct type of facade profile, proposes also the under-construction, looks and direction of installation of the wooden facade in such a way so that the house will be optically pleasing and also so that the facade fulfils other requirements for facade constructions.

Stability – every construction work must be stable as a whole and that also applies in the case of facades. Functionality has to be ensured for not just individual facade profiles but also the facade as a whole.

Heat protection and protection against moisture – here construction physics apply where it is necessary to prevent condensation of water vapours.

Heat protection and protection against noise – these are important requirements for the facade construction that must be solved during the project phase.

Shape change – planner and builder must count with the fact that wood changes its shape and size according to the surrounding climate. Therefore, the construction must be planned in such a way as to eliminate the change of size and shape as much as possible.

Surface finish – some types of wood used for facade do not need a surface treatment as they are resistant to climate effects on their own. Other types are completely dependent on correct surface treatment as they can work well in exterior only if they are impregnated or treated.

*Facade Northern spruce. Chalet profile 21x171 mm,
surface finish OSMO – Protective oil woodstain cedar n. 728*









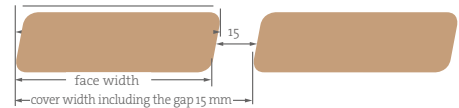



Facade profiles
from northern spruce

Facade profiles from northern spruce

Spruce is altogether the most important industrial wood of the middle and northern Europe, a support for the forestry industry. Grows abundantly all over Europe except Netherlands and Denmark.

There is 34–40 different types of spruce. In Europe 3 grow naturally, in Czech Republic just one.

Northern spruce grows with light age rings. Lightly yellowish–white wood that is rich in knots is easily machined. Except for typical lighter knots, part of this popular wood's characteristics are also black or black rimmed knots and also pitch deposits.

Profile	Dimension (mm)	lengths (m)	
Classic	19 x 196	4,20 – 5,10	
	19 x 146	2,70 – 5,10	
Classic / Softline	19 x 121	2,10 – 5,10	
CONO	26/13 x 146	2,10 – 5,10	
Chalet*	21 x 171	2,10 – 5,10	
Multi – Covering*	27 x 171	2,10 – 5,10	
Raute	21 x 68	3,30 / 4,20 / 4,80 / 5,40	<div style="display: flex; align-items: center;"> <div style="text-align: center;">  <p>Charged width (size of the profile) 15 face width cover width including the gap 15 mm</p> </div> <div style="margin-left: 20px;">  </div> <div style="margin-left: 20px;"> <p>17° for bevelling</p> </div> </div>
Raute*	21 x 55	2,10 – 5,10	 <p>17° for bevelling</p>
Raute*	21 x 90	2,10 – 5,10	 <p>17° for bevelling</p>

Northern spruce is supplied in A/B quality and follows valid norm ČSN EN 14519

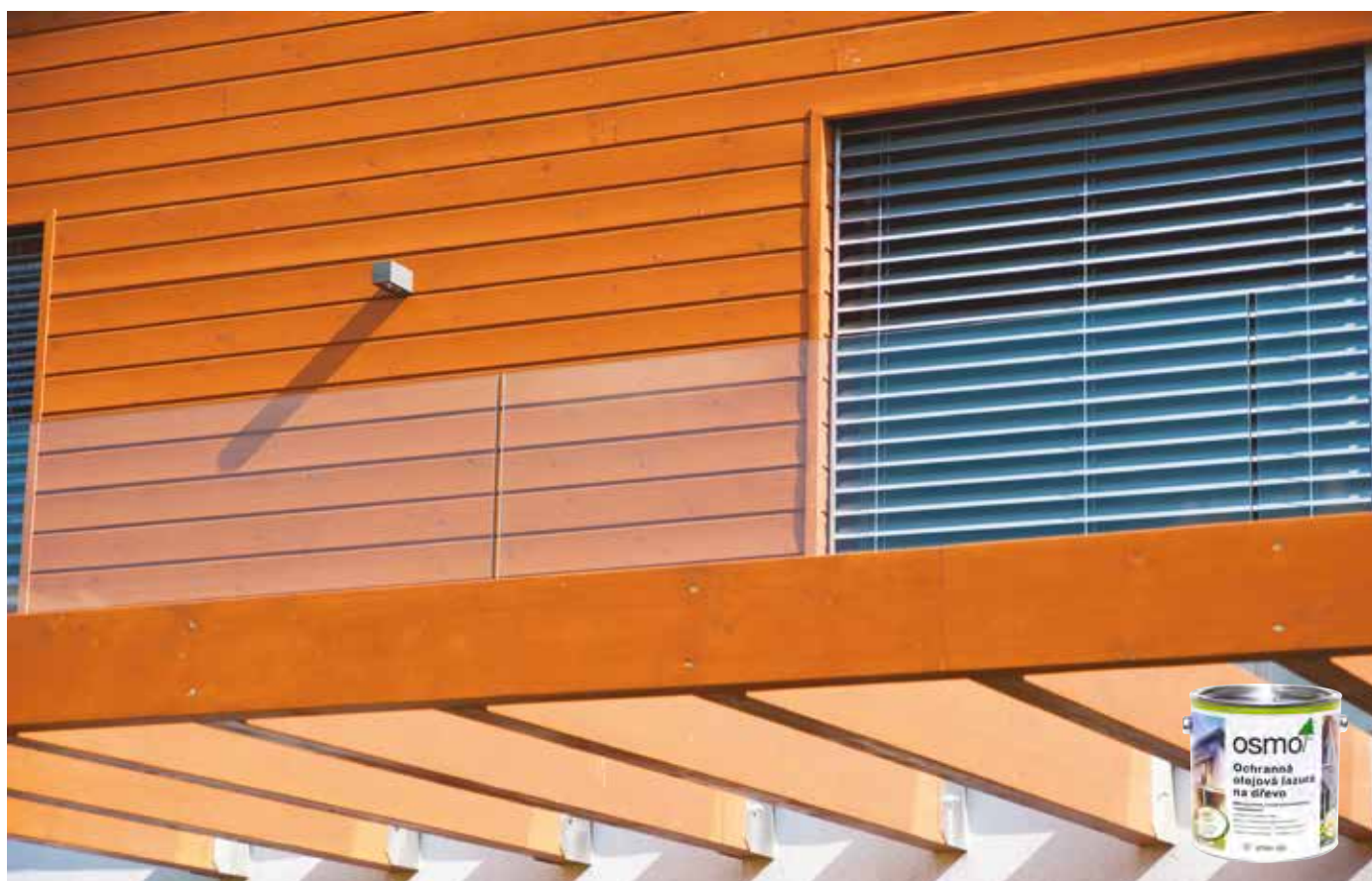
* production from 100 m²

REAL FACADE, Northern spruce, Cono profile 26/13 x 146 mm,
Surface treatment OSMO – Country colour RAL blue and red



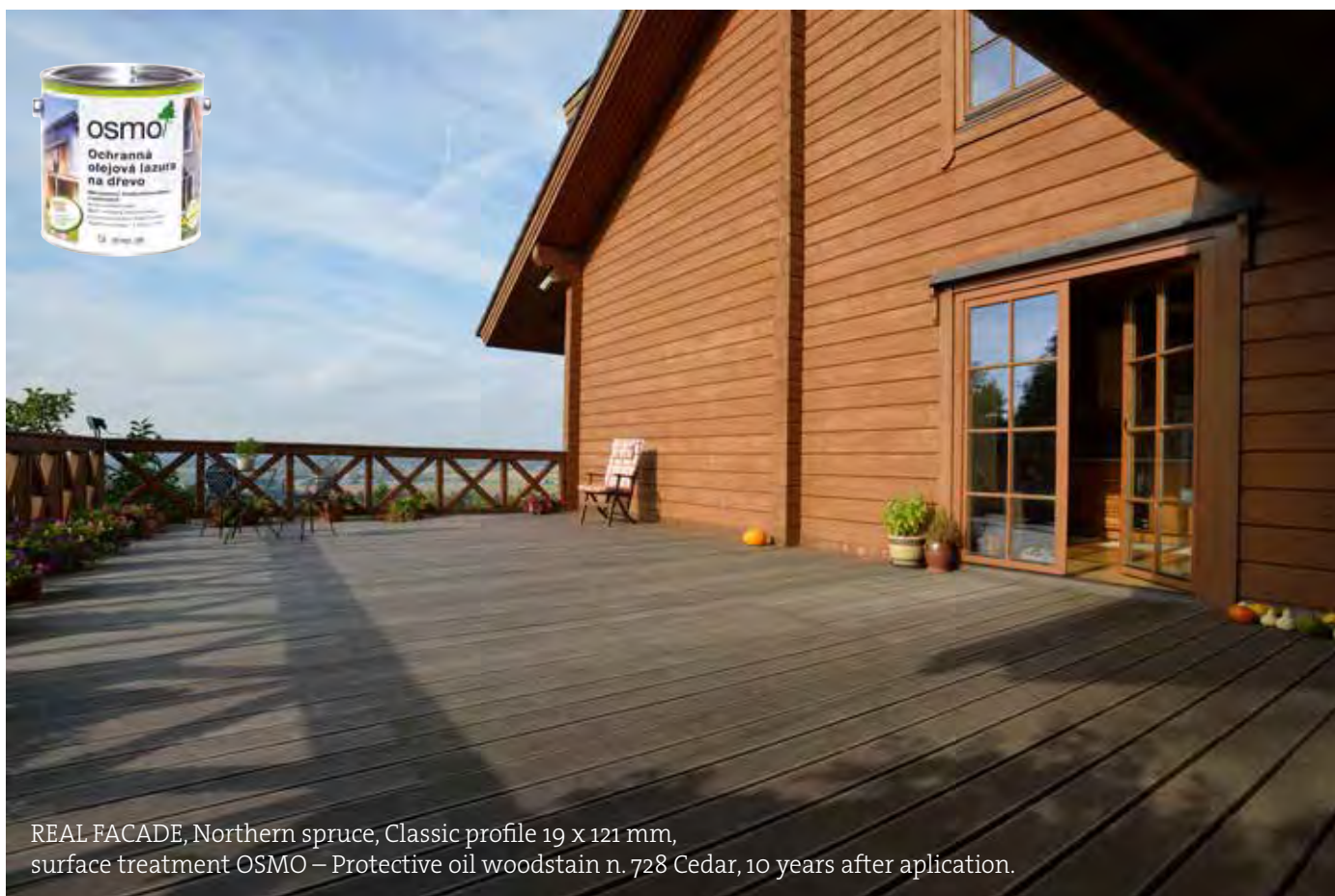
REAL FACADE, Northern spruce, Classic profile 19 x 146 mm,
surface treatment OSMO – Protective oil woodstain n. 702 Larch

Facade profiles from northern spruce



REAL FACADE, Northern spruce, Chalet profile 21 x 171 mm,
surface treatment OSMO – Protective oil woodstain n. 728 Cedar

REAL FACADE, Northern spruce, Classic profile 19 x 146 mm, surface treatment OSMO – Protective oil woodstain n. 728 Cedar



REAL FACADE, Northern spruce, Classic profile 19 x 121 mm, surface treatment OSMO – Protective oil woodstain n. 728 Cedar, 10 years after application.

Facade profiles from northern spruce



REAL FACADE, Northern spruce, Classic profile 19 x 146 mm,
surface treatment OSMO – Protective oil woodstain n. 702 Larch
and OSMO UV Protective oil n. 420 Transparent

Recommended fastening products

Screws – visible fastening

Hobotec ornamental head, stainless steel hardened



Ident. number	Dimension (mm)	TX size	Package contains
900782	3,2 x 25	TX 10	500
110294	3,2 x 30	TX 10	500
110295	3,2 x 35	TX 10	500
110296	3,2 x 40	TX 10	500
110297	3,2 x 50	TX 10	500
110298	3,2 x 60	TX 10	500

Hobotec ornamental head, brass-plated



Ident. number	Dimension (mm)	TX size	Package contains
903436	3,2 x 25	TX 10	500
903437	3,2 x 30	TX 10	500
903438	3,2 x 35	TX 10	500
903439	3,2 x 40	TX 10	500
903440	3,2 x 50	TX 10	500
903441	3,2 x 60	TX 10	500

Hobotec ornamental head, steel yellow zinc-plated

Ident. number	Dimension (mm)	TX size	Package contains
110280	3,2 x 20 mm	TX 10	500
110281	3,2 x 25 mm	TX 10	500
110282	3,2 x 30 mm	TX 10	500
110283	3,2 x 35 mm	TX 10	500
110284	3,2 x 40 mm	TX 10	500
110285	3,2 x 50 mm	TX 10	500
110286	3,2 x 60 mm	TX 10	500
944778	4,2 x 70 mm	TX 15	200
944779	4,2 x 80 mm	TX 15	200



Facade profiles from northern spruce

Hapatec

Stainless steel hardened



Ident. number	Dimension (mm)	TX size	Package contains.
111803	4,0 x 30	TX15	500
111810	4,0 x 40	TX15	500
111821	4,0 x 45	TX15	500
111811	4,0 x 50	TX15	500
111812	4,0 x 60	TX15	500
904569	4,5 x 45	TX20	200
111813	4,5 x 50	TX20	200
111814	4,5 x 60	TX20	200
111815	4,5 x 70	TX20	200
111816	4,5 x 80	TX20	200
100048	5,0 x 40	TX25	200
100049	5,0 x 45	TX25	200
111817	5,0 x 50	TX25	200
111818	5,0 x 60	TX25	200
111819	5,0 x 70	TX25	200
111820	5,0 x 80	TX25	200
111888	5,0 x 90	TX25	200
111889	5,0 x 100	TX25	200

Conditionally resistant to corrosion, not resistant to acids; 10 years of experience with no problems regarding corrosion with the suitable wood; not suitable for wood containing tannins such as cumaru, oak, merbau, robinie etc.; not suitable for atmosphere containing chlorine; stainless steel according to DIN 10088; 60% higher torque break than A2 and A4; hardened stainless steel can be magnetized.

Recommended surface treatment



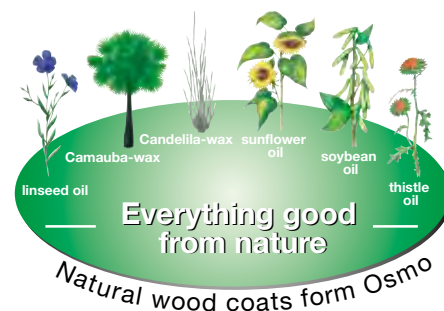
If colour treatment is required use OSMO Protective oil stain in the desired colour tone (18 standard tones) or OSMO Protective oil stain Effect.

Protective oil stain Effect is a decorative coat for wood that answers the current trends for facade colour designs and is supplied in 3 colour tones with metallic shades (silver acacia, silver graphite, silver onyx).



If colour treatment with a covering coat is required use OSMO Country colour (19 standard tones) or according to RAL sampler of 186 colour tones.

Coat application should be done according to the technical list of the chosen product.





Facade profiles from larch

Siberian larch

The most common coniferous forests in the world are larch forests, and the most important taiga is Siberian larch. This is valid especially for the West-Siberian lowlands, this species also climbs to the upper border of the forest. In broader spectrum, the Siberian larch also extends into north-east Europe. Just in Russian federation the larch forests cover approx. 264 mils. ha. which is around 38% of their forest lands. Trees in Siberia reach up to 40m and around 400 years of age. The

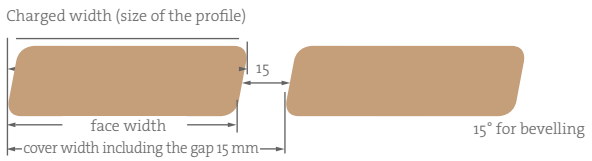





point of origin for Siberian larch is the West-Siberian lowlands, southern part of the mountainous central Siberia, to the west it reaches into Europe until the south-eastern edge of the White sea and almost to the edge of lake Onega, to the east it goes through Asia until the Baikal lake and to the southeast until Mongolia. It grows from southern Asian borders of former USSR until the northern border of the tundra. Siberian larch grows from almost sea-level to 2250 above. It grows

from widespread lowlands up until the Alpine border of mountain forests. Highest occurring in Altai (up to 3700m above sea level)

Description:

Colour: yellow-white to red-white sapwood, core-wood red-brown to dark red-brown, darkens. During stronger heating from the sun resin can seep through.

Density: approx. 650kg/m³.

Profile	Dimension (mm)	Lengths (m)	
Raute	28 x 68	2,10 – 4	
Raute	20 x 93	2,10 – 4	
CONO	26/13 x 144	2,10 – 4	
Classic	19 x 144	2,10 – 5,10	
Planed board	20 x 95	2,10 – 4	
Planed board	20 x 145	2,10 – 4	

Note: All profiles with tongue and groove are stated and charged per m² including the tongue.

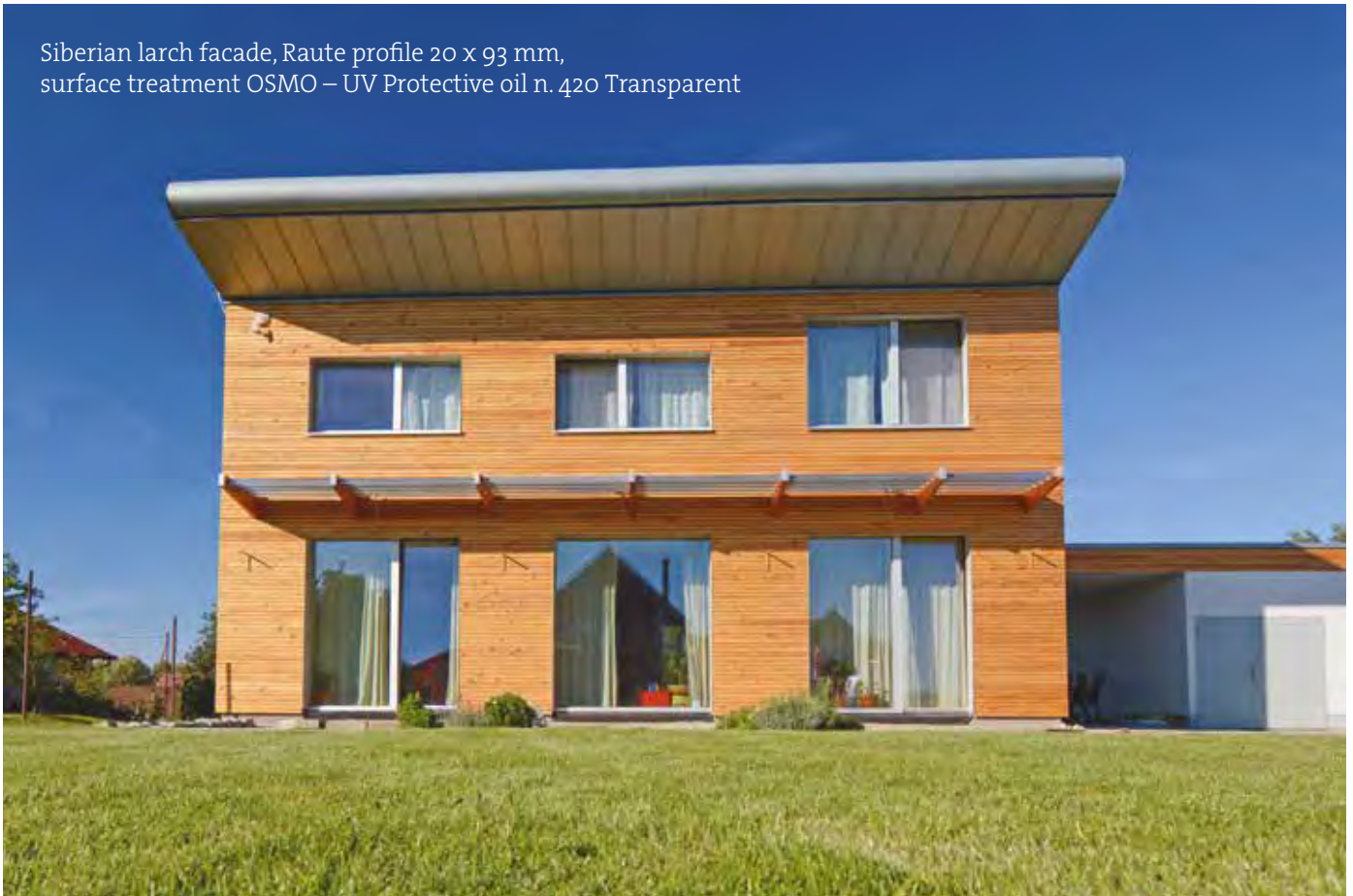
Facade profiles from Siberian larch

REAL FACADE, Planed boards from Siberian larch 20 x 140 mm,
surface treatment OSMO UV Protective oil transparent extra n. 420
+ OSMO single coat stain HS Plus n. 9234 Scandinavian red



Fence from Siberian larch, REAL FACADE, profile Planed board 20 x 145 mm,
surface treatment OSMO – Protective oil stain n. 708 Teak

Siberian larch facade, Raute profile 20 x 93 mm,
surface treatment OSMO – UV Protective oil n. 420 Transparent



Siberian larch facade, Raute profile 28 x 68 mm,
surface treatment OSMO – UV Protective oil n. 420 transparent, 3 years after application

Facade profiles from Siberian larch



Detail of Raute profile 28 x 68 mm



Installation of Raute profile 28 x 68 mm, ventilated facade with the use of diffusion foil



REAL FACADE, Siberian larch, Raute profile 20 x 93 mm, surface treatment OSMO Protective oil stain n. 728 Cedar

Facade profiles from Siberian larch

REAL FACADE, Siberian larch, Classic profile 19 x 144 mm
in combination with Raute profile 28 x 68 mm, left natural



Facade, Siberian larch, planed boards 20 x 95 mm,
Surface treatment OSMO Protective oil Extra n. 420 transparent



REAL FACADE, Siberian larch, Raute profile 28 x 68 mm,
Surface treatment OSMO Protective oil stain n. 728 Cedar



REAL FACADE, Siberian larch,
Raute profile 20 x 93 mm, left natural



Facade profiles from Silesian larch



REAL FACADE, Silesian larch, Classic profile 19 x 146 mm, left natural



Detail of REAL FACADE, Silesian larch, Raute profile 18 x 110 mm, surface treatment OSMO single coat stain HS plus n. 9212 Silver poplar





Silesian larch

This type of larch is being harvested in Czech Republic only in the region of Jeseník foothills and part of Silesia.

Description:

Colour: yellow–white to red–white sapwood, core–wood red–brown to dark red–brown, darkens. During stronger heating from the sun resin can seep through. Silesian larch has a higher amount of larger knots than Siberian larch.

Density: approx. 550kg/m³.

Profile	Dimension (mm)	Lengths (m)	
Raute	18 x 110	3 – 5	 17° for bevelling
Raute with tongue and groove	24 x 107	3 – 5	
Classic	19 x 146	3 – 5	
	19 x 121	3 – 5	
Planed board	19 x 121	2,5 + 4 m	 lightly bevelled edges

Grade: A/B

Siberian/Silesian larch – yellow–white to red–white sapwood, core–wood red–brown to dark red–brown, darkens.

Texture: tangentially cut wood is used for facade profiles.

Additional information: Siberian/Silesian larch contains higher amount of resin which can seep through during stronger heating from the sun. Thanks to the higher contents of oily substances in the wood, larch can endure the outside climate even without surface treatment for a very long time. Sun, wind and rain will in time alter the colour of the larch wood, which will obtain the typical silver–grey patina. Larch facade boards are supplied according to ČSN EN 14519.

1. Healthy wood with small amount of sapwood is used. differences in colour and graining are natural properties of wood and therefore have to be tolerated.
2. Artificially dried wood meaning the moisture of wood is approx. 16–20% depending on the profile type.
3. Profiles are planed with dimensional accuracy, deficiencies in the planing of tongue and groove may be individually included and also broken–out knots at the edges, where installation and functionality of the facade elements is guaranteed.
4. Very occasionally small loose knots may be contained (max. diameter 15mm). Black and black–rimmed knots are allowed. split knots are allowed on the grading side as this is a natural property of larch wood.
5. Splits on grading side (not running along the width of the board) may be contained up to a third of the total length of the board. End–splits are allowed up to the width of the board. Some of the typical properties are propensity to longitudinal splits and sap seeping, occurring during and after installation. For the removal of sap using OSMO sap removal is recommended. To avoid rust streaks, we recommend to use fastening and connecting materials from stainless steel. Due to the tendency of larch to cleave, all the connecting spots should be pre–drilled (especially at the edges and end of the boards)
6. Resin pockets and core barrels are allowed in a reasonable quantity.
7. Rotary growth is allowed if installation is possible.

Facade profiles from Silesian larch

Recommended fastening materials

Screws – visible fastening

Hobotec – stainless steel hardened, with ornamental head



Id. No.	Dimension (mm)	TX size	Package contains
945045	4,5 x 40 mm	TX 20	200
945046	4,5 x 45 mm	TX 20	200
945047	4,5 x 50 mm	TX 20	200
945048	4,5 x 60 mm	TX 20	200
945049	4,5 x 70 mm	TX 20	200
945050	4,5 x 80 mm	TX 20	200
945051	5,0 x 50 mm	TX 25	200
945052	5,0 x 60 mm	TX 25	200
945053	5,0 x 70 mm	TX 25	200
945054	5,0 x 80 mm	TX 25	200
945055	5,0 x 90 mm	TX 25	200
945056	5,0 x 100 mm	TX 25	200

Terrassotec, stainless steel hardened, antik



Id. No.	Dimension (mm)	TX size	Package contains
B905530	5,5 x 50	TX25	100
B905529	5,5 x 60	TX25	100
B905531	5,5 x 70	TX25	100

Hapatec Heli V4A



Id. No.	Dimension (mm)	TX size	Package contains
100059	4,5 x 50	TX20	200
100055	4,5 x 60	TX20	200
100056	4,5 x 70	TX20	200
100057	4,5 x 80	TX20	200
100051	5,0 x 50	TX25	200
100052	5,0 x 60	TX25	200
100053	5,0 x 70	TX25	200
100054	5,0 x 80	TX25	200
100058	5,0 x 100	TX25	200

Terrassotec A2



Id. No.	Dimension (mm)	TX size	Package contains
905539	5,5 x 50	TX25	100
905540	5,5 x 60	TX25	100
905541	5,5 x 70	TX25	100
905542	5,5 x 80	TX25	100

Facade clips – invisible fastening for raute profiles



Attach the facade clip using the profile screws.



Repeat the process with all other facade profiles.



Fasten the profile to the beam.



Simply slide the next profile in and attach only at the top using a screw.



The size of the dilatation gap will be automatically set by the head of the screw.

Done!

Recommended fastening materials

Facade clip type F black						Facade profile dimension			Size of dilatation gaps between facade profiles		Number of clips needed for m2 (example)		
Ident. number	Type	Package	Dimension mm			Min.– Max. width mm	Min. thickness mm	Profile screw length mm	Terrasotec installed in hole A mm	Terrasotec installed in hole B mm	Min. width of the facade profile pieces	Max. width of the facade profile pieces	
			L	W	H								
946010	F115 x 17	300	115	15	5,5	57 – 68	19	17	10	variable	28	24	
946012	F115 x 22	300	115	15	5,5	57 – 68	24	22	10	variable	28	24	
946013	F115 x 28	300	115	15	5,5	57 – 68	30	28	10	variable	28	24	
946014	F130 x 17	300	130	15	5,5	68 – 80	19	17	10	variable	24	20	
946015	F130 x 22	300	130	15	5,5	68 – 80	24	22	10	variable	24	20	
946016	F130 x 28	300	130	15	5,5	68 – 80	30	28	10	variable	24	20	
946017	F145 x 17	300	145	15	5,5	80 – 95	19	17	10	variable	20	18	
946018	F145 x 22	300	145	15	5,5	80 – 95	24	22	10	variable	20	18	
946019	F145 x 28	300	145	15	5,5	80 – 95	30	28	10	variable	20	18	
Fastening screw for underconstruction Terrasotec 4,5 x 40 mm						Formula for determining the amount: (1000mm/width of the facade profile) times (1000mm/distance between under-construction beams) = pieces/m ²						Distance between beams: 600 mm Dilatation gap: 10mm	

300 facade clips. Each clip contains 1 Terrasotec 4,2 x 28 mm and 2 profile screws 4,2 x profile screw length.

Recommended surface treatment



If colourless surface treatment is required, use OSMO UV Protective oil n. 420.
Apply according to the technical list of the product.



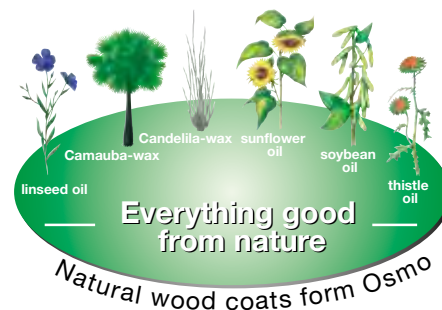
In case you would like to protect the wood and also maintain most of its nature, use slightly pigmented coat in chosen colour tone OSMO UV Protective oil coloured EXTRA (6 colour tones).
Apply according to the technical list of the product.



If coloured surface treatment is required, use OSMO Protective oil stain in chosen colour tone (18 standard tones) or OSMO Protective oil stain Efekt.



Protective oil stain Efekt is a decorative coat for wood, which goes with current trends in colour design of facades and is offered in 3 variations with metallic shades. (silver acacia, silver graphite, silver onyx).
Apply according to the technical list of the product.





REAL FACADE, Thermo pine, Raute profile 26 x 92 mm, left natural



REAL FACADE, Thermo pine, Raute profile 26 x 92 mm, left natural

Facade profiles from thermo wood pine

Facade profiles from thermo wood pine

Thermo wood is dimensionally stable, resilient and entirely ecological with higher resistance against biological pests, our facade profiles are made from pine harvested in Finland.

Processing:

Thermo wood supplied by us is made using a WTT method during which the wood is treated at 180°C.



- No chemicals are used during the thermal treatment. Only a little bit of water is needed to start the process. The rest takes place thanks to a gradual increase of temperature inside of a pressurised chamber (7–9 bars). Gradual heating of the wood releases moisture and creates an environment full of steam that ensures even colouring and treatment of the wood. Thanks to this process the wood is environment friendly and doesn't endanger surrounding fauna.
- Before the actual thermal treatment, the wood is pre-dried to 12–14% of moisture content. An important part of the WTT process is that the wood is never dried out completely. On the contrary, the remaining moisture content stays at 6–8%. This is the final humidity for thermo-wood.
- Modern technology controls the entire manufacturing process and thereby guaranteeing a uniform treatment of the wood. Thanks to this treatment the pine changes its original naturally light yellow tone to a light dark colouring.
- The wood obtains significantly improved dimensional stability and thereby reducing the wood's vulnerability to deformation respectively swelling and shrinking of the wood. Dimensional changes are reduced by up to 60%.
- The wood shows increased resistance to rot and mould and also improved insulation properties.

Coat and colour

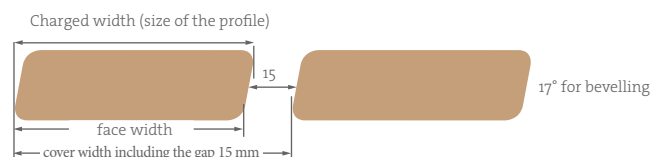
If you opt for treating your thermo-wood decking with a coat to prevent it from naturally turning grey (occurs approx. 1 year after installation) we recommend to use OSMO Decking oil n. 010 Thermo-wood oil. OSMO Decking oil is a coat based on natural plant oils and waxes and thanks to these materials is this coat not harmful to health in any way. The pigment contained in this coat doesn't cause any significant change in the natural tone of the thermo-pine, on the contrary the tone gets even more enhanced and furthermore the wood is protected from the UV rays that are the main cause of the wood turning grey. Do not however put the coat on any sooner than 3 months after installation. During these 3 months the wood will naturally lose some of the substances within and it will finish stabilizing after the thermal treatment.

Wood density

Approx. 510 – 550 kg/m³.

We supply facade profiles from Thermo pine according to ČSN EN 14519.

Profile	Dimension (mm)	Lengths (m)
Raute	28 x 68	1,50 – 5,10
Raute	26 x 92	1,50 – 5,10
Classic	19 x 140	2,10 – 5,10
Joist planed on 4 sides	42 x 42	2,10 – 4,20
	42 x 68	



Recommended fastening materials

Screws – visible fastening

Hapatec Heli V4A

Id. No.	Dimension (mm)	TX size	Package contains
100059	4,5 x 50	TX20	200
100055	4,5 x 60	TX20	200
100056	4,5 x 70	TX20	200
100057	4,5 x 80	TX20	200
100051	5,0 x 50	TX25	200
100052	5,0 x 60	TX25	200
100053	5,0 x 70	TX25	200
100054	5,0 x 80	TX25	200
100058	5,0 x 100	TX25	200

Terassotec V2A

Id. No.	Dimension (mm)	TX size	Package contains
905539	5,5 x 50	TX25	100
905540	5,5 x 60	TX25	100
905541	5,5 x 70	TX25	100
905542	5,5 x 80	TX25	100

- conditionally resistant to corrosion, not resistant to acids
- not suitable for atmosphere containing chlorine
- it is necessary to pre-drill holes for screws as that reduces resistance against stretching on average by 6,5%



Facade clips – invisible fastening for raute profiles



Attach the facade clip using the profile screws.



Repeat the process with all other facade profiles.



Fasten the profile to the beam.



Simply slide the next profile in and attach only at the top using a screw.



The size of the dilatation gap will be automatically set by the head of the screw.

Done!

Facade profiles from thermo wood pine

Recommended fastening materials

Facade clip type F black						Facade profile dimension			Size of dilatation gaps between facade profiles		Number of clips needed for m2 (example)	
Dimension mm						Min.– Max. width	Min. thickness	Profile screw length	Terrassotec installed in hole A	Terrassotec installed in hole B	Min. width of the facade profile	Max. width of the facade profile
Ident. number	Type	Package	L	W	H	mm	mm	mm	mm	mm	pieces	pieces
946010	F115 x 17	300	115	15	5,5	57 – 68	19	17	10	variable	28	24
946012	F115 x 22	300	115	15	5,5	57 – 68	24	22	10	variable	28	24
946013	F115 x 28	300	115	15	5,5	57 – 68	30	28	10	variable	28	24
946014	F130 x 17	300	130	15	5,5	68 – 80	19	17	10	variable	24	20
946015	F130 x 22	300	130	15	5,5	68 – 80	24	22	10	variable	24	20
946016	F130 x 28	300	130	15	5,5	68 – 80	30	28	10	variable	24	20
946017	F145 x 17	300	145	15	5,5	80 – 95	19	17	10	variable	20	18
946018	F145 x 22	300	145	15	5,5	80 – 95	24	22	10	variable	20	18
946019	F145 x 28	300	145	15	5,5	80 – 95	30	28	10	variable	20	18
Fastening screw for underconstruction Terrassotec 4,5 x 40 mm						Formula for determining the amount: (1000mm/width of the facade profile) times (1000mm/distance between under-construction beams) = pieces/m ²				Distance between beams: 600 mm Dilatation gap: 10mm		

300 facade clips. Each clip contains 1 Terrassotec 4,2 x 28 mm and 2 profile screws 4,2 x profile screw length.

Recommended surface treatment



Thermally treated wood used in exterior can be given a coat, ideally wax-oil based OSMO COLOR – oil for Thermo wood n. 010. The coat should be refreshed depending on necessity approx. after 3 years. without this protective coat the thermo wood will naturally turn grey over a period of approx. 12 months and a silver patina will be created on the surface. *Apply according to the technical list of the product.*



Another option is to use any colour tone from the range of OSMO Protective oil stain (18 standard tones) or Protective oil stain Efekt (offered in 3 tones with metallic shades). *Apply according to the technical list of the product.*





REAL FACADE Western Red Cedar, classic profile 17,5 x 137 mm, Clear grade, surface treatment OSMO – UV Protective oil transparent n. 420

Facade profiles from Western Red Cedar, Clear

Facade profiles from Western Red Cedar

“Western Red Cedar”, in nature also known as “the tree of life”. Botanically “*Thuja plicata*” belongs to Cupressaceae. The area of spread of western red Cedar is west part of North America from Alaska to California and east to Montana. Trunks can grow to a knotless height of 25m. the trees can reach up to 1000 years of age. The wood of western red Cedar is quite cold-resistant.

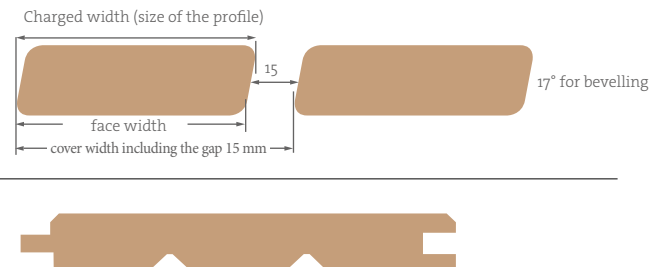
Description:

Colour: sapwood is whitish and 2-5cm wide, core wood is reddish brown to red-brown, often variable. Density of dried wood ranges depending on the width of the age-rings between 340-460 kg/m³. After drying the wood has an average dimensional stability, is easy and clean to work with, shows evenly smooth surface, easy to polish and finish. The moisture upon delivery is approx. 18-20% for exterior flooring wood and 10-12% for facades. Cedar wood has been highly priced even in ancient times. Contains resin, that gives it its typical smell. The

contained substances may leak out from areas of fresh cuts and cause colouring of the walls. Therefore, we recommend to treat all cut edges with OSMO Wax for cut edges n. 5735. With Western Red Cedar in exterior constructions it is absolutely essential to use non-corroding fastening means. Natural light greyness after almost half a year of exposure to weather is normal and doesn't affect its quality and durability. Colour differences between individual planks are natural and may be fairly visible.

Wood density: approx. 340 - 460 kg/m³.

Profile	Dimension (mm)	Lengths (m)
Raute	20 x 90	2,10 – 4
Classic	17,5 x 137	2,10 – 5,10



Recommended fastening materials

Screws – visible fastening

Hapatec Heli V4A

Id. No.	Dimension (mm)	TX size	Package contains
100059	4,5 x 50	TX20	200
100055	4,5 x 60	TX20	200
100056	4,5 x 70	TX20	200
100057	4,5 x 80	TX20	200
100051	5,0 x 50	TX25	200
100052	5,0 x 60	TX25	200
100053	5,0 x 70	TX25	200
100054	5,0 x 80	TX25	200
100058	5,0 x 100	TX25	200



Another possibility for attaching facade profiles is using facade clips – invisible connection – see pages 20+21 of this booklet.

REAL FACADE Western Red Cedar, Classic profile 17,5 x 137 mm, left natural



*REAL FACADE Western Red Cedar Clear, Classic profile 17,5 x 137 mm, left natural
Decking REAL DECK, Western Red Cedar knotty, 40 x 140 mm*

Facade profiles from Western Red Cedar, Clear



Recommended surface treatment



If colourless surface treatment is required, use OSMO UV Protective oil transparent n. 420. This coat has a protection factor UV12 (in comparison to untreated wood) and is suitable for protection of vertical wood in exterior areas against turning grey. Simple application without the need for sanding or base coat.

Apply according to the technical list of the product.



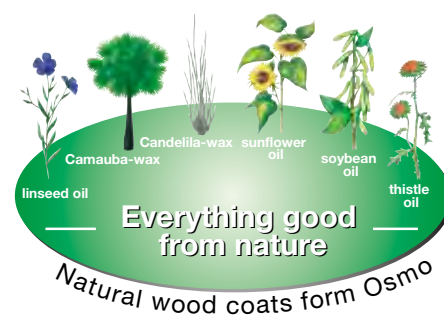
OSMO UV Protective oil coloured Extra n. 428 is a semi-matt final coat for exterior use. It is a product based on natural oils, microporous, doesn't crack, doesn't peel, doesn't flake. Contains colour pigments that are colour-matched to the natural colour of Western Red Cedar wood.

Apply according to the technical list of the product.



If coloured surface treatment is required, use OSMO Protective oil stain in chosen colour tone (18 standard tones). This will provide the ideal protection of wood from UV rays and lets you add optical value to it.

Apply according to the technical list of the product.





Facade profiles from Dark Red Meranti

REAL FACADE Dark Red Meranti,
RAUTE profile 20 x 90 mm, surface
treatment OSMO UV Protective oil
transparent n. 420

Dark Red Meranti occurs in Southwest Asia, the Philippines, Indonesia and Malaysia, where it thrives in the tropical lowland rainforests and in the lower highlands.

Description:

Colour: sapwood is yellowish-grey and 4–8 cm wide, heartwood is pale pink to reddish brown. Lighter pieces can occur that have been produced from logs originating in the southern growth areas. Dry density of the wood ranges with the density of the age-rings between 560 – 860 kg/m³. Dark red Meranti is characterised by uniform texture with slight graining. After drying this wood is dimensionally stable, easy and clean to work with, shows evenly smooth surface, easy to apply surface finish. wood is supplied with moisture content approx. 16–18%.

The contained substances may leak out from areas of fresh cuts and cause colouring of the walls. Therefore, we recommend to treat all cut edges with OSMO Wax for cut edges n. 5735. With Dark Red Meranti it is absolutely essential to use non-corroding fastening means. Natural light greyness after almost half a year of exposure to weather is normal and doesn't affect its quality and durability. Colour differences between individual planks are natural and may be fairly visible.

Wood density: approx. 560 – 860 kg/m³

Profile	Dimension (mm)	Lengths (m)	
Raute	20 x 90	2,10 – 4	
Softline	16 x 120	1,83 – 4,87	
Planed board	18 x 140	1,83 – 4,87	
Planed joist	30 x 55	1,83 – 5,87	

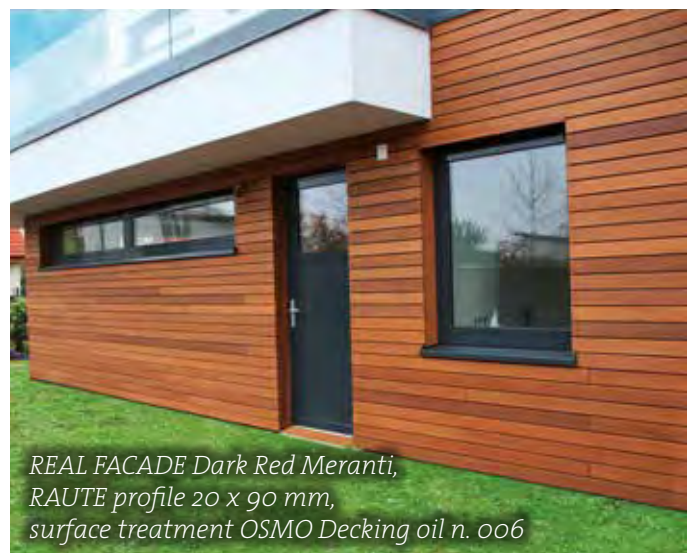
Facade profiles from Dark Red Meranti



REAL FACADE Dark Red Meranti, RAUTE profile 20 x 90 mm, left natural, 2 years after installation



REAL FACADE Dark Red Meranti, RAUTE profile 20 x 90 mm, surface treatment OSMO Protective oil stain n. 706 oak



REAL FACADE Dark Red Meranti, RAUTE profile 20 x 90 mm, surface treatment OSMO Decking oil n. 006



REAL FACADE Dark Red Meranti, RAUTE profile 20 x 90 mm,
surface treatment OSMO UV Protective oil transparent n. 420

Facade profiles from Dark Red Meranti

Recommended fastening materials

Hapatec Heli V4A



Ident. number	Dimension (mm)	TX size	Package contains
100059	4,5 x 50	TX20	200
100055	4,5 x 60	TX20	200
100056	4,5 x 70	TX20	200
100057	4,5 x 80	TX20	200
100051	5,0 x 50	TX25	200
100052	5,0 x 60	TX25	200
100053	5,0 x 70	TX25	200
100054	5,0 x 80	TX25	200
100058	5,0 x 100	TX25	200

- resistant to corrosion, conditionally resistant to acids – suitable for wood containing tannins and atmosphere containing salts – not suitable for use in indoor pools – special geometry of screws reduces the torque for screwing. Thereby reducing the danger of the screw snapping as it is made from a softer stainless steel V4.

Terassotec V2A



Id. No.	Dimension (mm)	TX size	Package contains
905539	5,5 x 50	TX25	100
905540	5,5 x 60	TX25	100
905541	5,5 x 70	TX25	100
905542	5,5 x 80	TX25	100

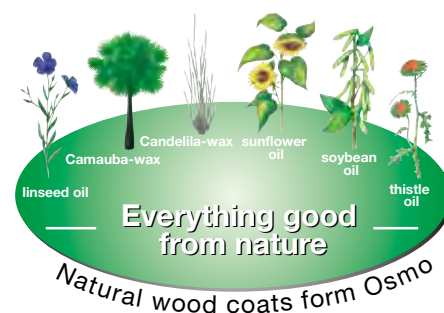
- conditionally resistant to corrosion, not resistant to acids
- not suitable for atmospheres containing chlorine

Another possibility for attaching facade profiles is using facade clips – invisible connection – see pages 20+21 of this booklet.

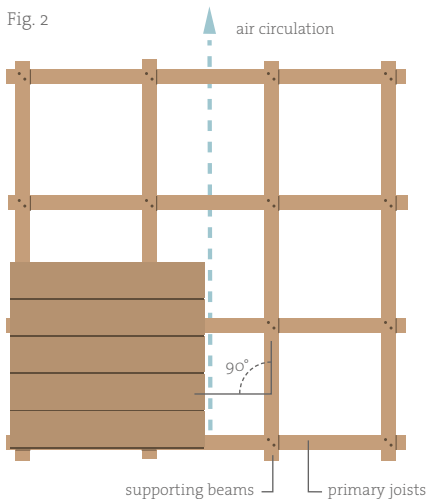
Recommended surface treatment



We recommend surface treatment with pigment base from the range of OSMO Protective oil stain in chosen colour tone (18 standard tones) or OSMO Decking special oil Bangkirai light n. 006. This will provide the ideal protection of wood from UV rays and lets you add optical value to it. *Apply according to the technical list of the product.*



Rules for the installation of wooden facade profiles



Protection against biological attack

It is necessary to ensure the protection against biological attack and thereby obtain sufficient lifespan:

1. structural protection
2. natural durability of wood
3. chemical protection
4. surface treatment
5. regular checks and maintenance

Structural protection

The main threat for wooden constructions in exterior rot caused by wood-infesting fungus. To ensure the required lifetime of wooden construction products or elements it is vitally important to keep the wood moisture below the level necessary for the fungus to thrive and grow, which is 20%. The equilibrium moisture in covered exteriors ($15 \pm 3\%$) and uncovered exteriors ($18 \pm 6\%$) is usually reached after a longer time in the place of use. The moisture of the facade wood can and usually does change with time after installation. When projecting wooden construction including its details the aim is to ensure fast, unrestricted rainwater runoff. If possible it is better to choose wood with vertical fibres, because water runs better along the fibres inside wood. Water gets stuck in pockets that it can't escape from, on top and bottom horizontal planes and in all gaps and spaces smaller than 6 mm. Pockets and gaps smaller than 6 mm (10 mm to be sure) have to be avoided.

This also means that it is impossible to extend lengths by face to face connection of two profiles whether on top of a joist or not. Potential connection is possible using a sawtooth con-

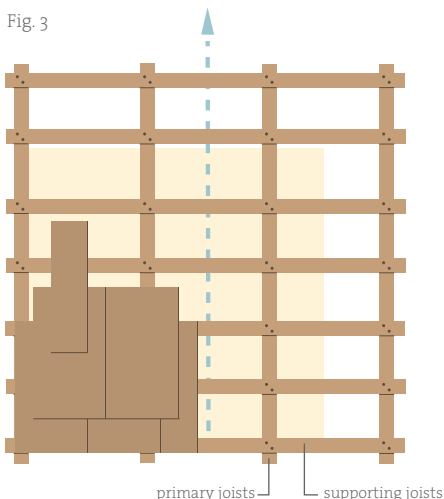
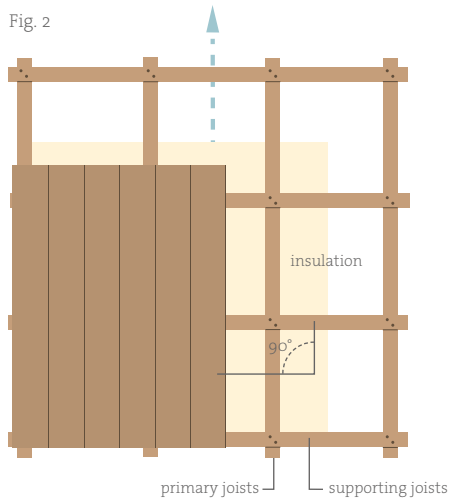
nection but has to be agreed on prior to installation. It is important to avoid the contact of profile faces with walls, longitudinal wood and so on. Face areas have to remain accessible for checks and maintenance. Top horizontal planes have to be installed under angle. Bottom horizontal planes have to be installed slanted or with a runoff groove to provide water with means to runoff quickly. Bottom edge of the facade can not be near any other horizontal planes (ground, decking and so on) to prevent splashing of rainwater. It is also necessary to plan, according to these rules, the connection of profiles to projected door and window gaps. Minimal thickness of solid wood facades is 18 mm.

Natural durability of wood

Information about the natural durability and lifetime of wood and wood-based materials can be found in European norms of the row 335, 350 and ČSN EN 460. For the chosen type of wood, you can find the relevant class of durability in charts 2 and 3 ČSN EN 350-2. In chart 1 ČSN EN 470 in the appropriate class of use (this norm uses the term threat class) we can find under what conditions can the different types of wood be used.

Chemical protection

The aim of chemical protection is to protect wood from fungus attack and insect damage. If the chosen wood isn't naturally durable it is necessary to use chemical protection. In classes 2 and 3 chemical protection isn't usually necessary. Nonetheless in class 3 chemical protection is recommended for the faces of profiles especially



Rules for the installation of wooden facade profiles

with woods form durability classes 3 and 4 (such as spruce, larch, pine). For class of use 3 it is not suitable to use woods from durability class 5 (such as birch, beech, ash, maple, poplar, alder)

Surface treatment

Surface treatment of a wooden facade protects the wood from moisture and effects of UV rays. UV rays gradually damage the surface treatment as well as the protected wood. The aim of the surface treatment is to prevent water from penetrating the wood and increasing its moisture content. Water penetrates into wood best at locations where its fibres have been cut. This is at milled surfaces and mainly at face (cross-section) cuts. Water absorption at a cross-section cut is approximately twenty times higher than at a plane. Cross-section cuts should always have surface treatment.

ČSN EN row 927 „Coating matter – Coating materials and coating systems for wood in exterior“ classes facade cladding as semi-stable wooden elements. This has to be reflected in the choice of surface treatment. Surface treatment can be diffusely open or closed. First group contains oil, oil-wax or solvent based coats that do not form a film and second group, water-resistant coating materials that form a film. First group allows moisture to penetrate into the wood but also allows the moisture to escape during drying.

Second group contains non-transparent and semi-transparent pigmented coating materials. If the coating film is undamaged it can effectively keep the wood moisture at a low and acceptable level, below the critical value at which the wood-infecting fungus is active. With time the coating film can develop cracks and the chance of water penetrating into wood increases. Narrow cracks allow water

to be soaked up faster than expelled. To prevent this the surface treatment has to be regularly checked and maintained.

Checks and maintenance

It is necessary to check and maintain wooden cladding in regular intervals, ideally annually. Most of all it is important to inspect face (cross-section) areas. This is another reason why they have to be accessible for maintenance and checks.

Supporting structure

Supporting structure must be designed so that it withstands the weight of itself, facade and external forces, predominantly wind. Furthermore, it must allow for the attaching of the facade so that it creates a plane with variations allowed by general regulations. To ensure safe connection of facade to under-construction it is recommended to have the distance between joists 50–70cm depending on the thickness of the facade profile.

Connecting materials

Sturdy fastening to the under-construction using a larger amount of connecting materials prevents dimensional and shape changes, but solid points of connection can cause cracks in the profiles affecting the visual impact and potential for the water to enter the created gaps. Heads of the screws have to be in line with the profile cover area. Holes for the screws have to be pre-drilled. No cracks can be created around the heads of the screws.

Connecting materials have to be permanently resistant to corrosion.

Length of the connecting materials has to be chosen so that it ensures sufficient sturdiness of connections, but not to stick out and damage potential foil. The minimum distance for screws from the end of a board is 3 cm maximum distance is 5 cm. This prevents potential cracks on the ends as the wood works.

Ventilation gap

The function of a ventilation gap is to lead away moisture coming through the wall from interior and thereby protect the facade from getting wet. For the ventilation gap to fulfil its function it has to be opened along its length on top and bottom. This has to be true even for horizontal connections with doors, windows and so on. Vents have to be covered with a grill to prevent insects, rodents and bats from getting in. Effective ventilation gap is approx. 20 mm wide, greater width is recommended for especially tall facades (multiple storeys).

Appearance

The appearance of a wooden facade is determined by the type of wood and its structure. Colour of the wood changes with time. Most woods darken due to the influence of light, some get lighter and some change colour. Absolutely different colouring is obtained by facades that are partially covered or shaded by design elements. Such a facade will have after some time absolutely different colour parts. There can be no water coming down onto a facade from other surfaces (roofs, balconies and so on), otherwise it will become dirty and unattractive because of it. Facades can become dirty from splashing of rain-water from other horizontal surfaces as well.

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