

Applications

Acoustic panels have a wide range of indoor applications such as wall and ceiling panels, exhibition booth construction and separating wall elements. These panels are the best solution for applications where insulation, acoustic performance, durability and design are required. Distance and width between grooves allow the panels to absorb noise and create a healthy, pleasant and more peaceful environment.

Panels are ready for use, easily mounted and environmentally friendly.

Basic material for panels

Birch plywood - Riga Decor, Riga Lacquer, Riga Ply, Riga Ignisafe* are recommended as basic material for acoustic panels.

Material	Maximum size (mm)	Thickness (mm)
Riga Decor	1525 x 3050	15; 18
Riga Lacquer	1250 x 3050	15; 18
Riga Ply	2150 x 3850	15; 18
Riga Ignisafe	1525 x 3050	15; 18

* Information about the characteristics of the material can be found in the specific product leaflet.

Machining and treatment

Panels are mechanically processed by grooving with a distance of 16 mm and width 4 mm on the decorative face of panel, and with a distance of 16, 32 or 64 mm on the reverse face of panel.

According to customer's requirements panels can be machined and treated: T&G, cut-to-size, drilled, milled, lacquered, treated with fire retardant material and a nonwoven fabric can be glued on the reverse face of the panel.

Gluing classes

Plywood is glued with waterproof phenol formaldehyde resin adhesive. The weather and boiling water resistant bonding meets the requirements of the following standards:

EN 314 / 3rd class;
BS 1203 / H 4 (previously WBP);
DIN 68705 Part 3 / type BFU 100.

Formaldehyde emission

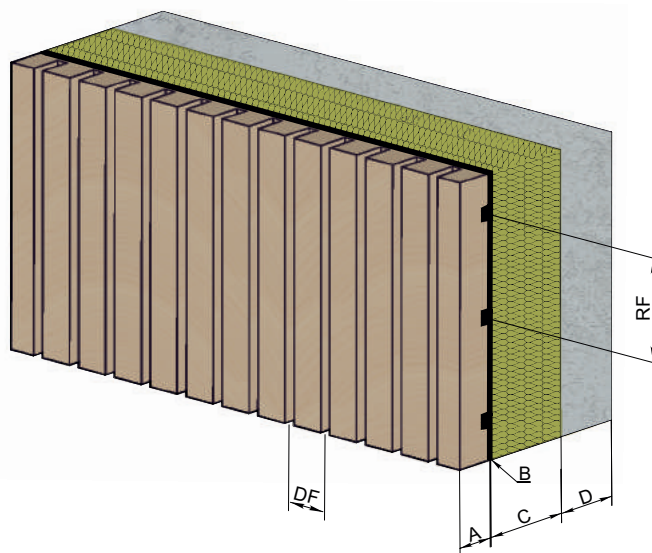
In accordance with the standard EN 13986 the formaldehyde emission meets the Class E1 requirements (test method EN 717 Part 2). Riga Ply glued with phenol-formaldehyde resins meets the CARB Phase 2 and Japanese 4-Star Regulation's requirements and Finnish Emission Classification of Building Materials M1.

Testing report

The measurements of the plywood panel sound absorption coefficient are made in cooperation with acoustics laboratory «R&D akustika» according to EN ISO 11654.

The following test results are for unvarnished panels.

Acoustic panel construction



A	Plywood	Thickness: 15 mm
B	Nonwoven fabric	Density: 60 g/m ³
C	Mineral wool	Density: 80 kg/m ³
D	Air Gap	
DF	Decorative face groove	Width: 4 mm Depth: 12 mm
RF	Reverse face groove	Width: 4 mm Depth: 3 mm



Acoustic Panels

Grooved

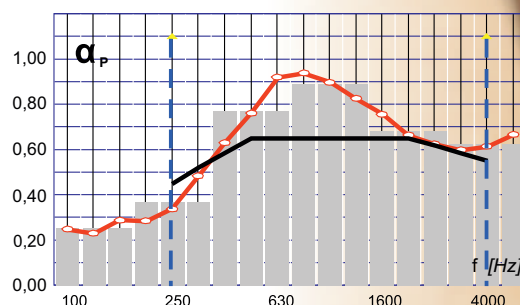


Panel M 4-16/4-16

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	16	25	0

Absorption coefficient: α_w : 0.65

Absorption class: C

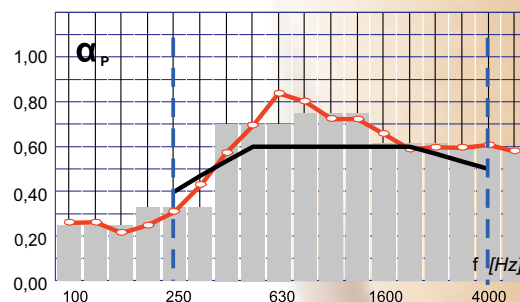


Panel M 4-16/4-32

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	32	25	0

Absorption coefficient: α_w : 0.60

Absorption class: C

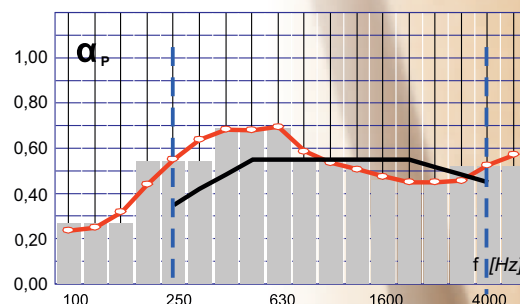


Panel M 4-16/4-64

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	64	25	0

Absorption coefficient: α_w : 0.55

Absorption class: D

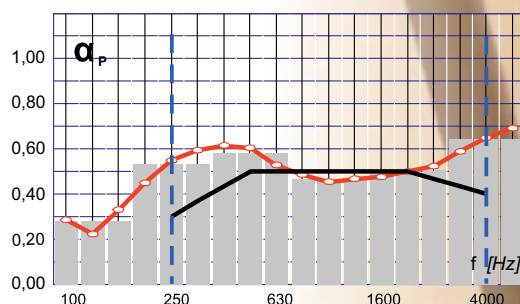


Panel M 4-16/4-192

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	192	25	0

Absorption coefficient: α_w : 0.50

Absorption class: D

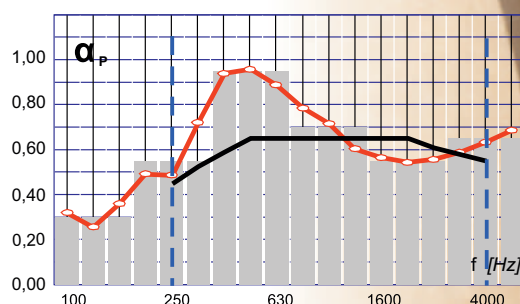


Panel M 4-16/4-16

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	16	25	35

Absorption coefficient: α_w : 0.65

Absorption class: C



Grey bar: Predicted sound absorption coefficient octave bands

Red line: Predicted sound absorption coefficient in 1/3 octave bands

Black line: Reference curve by EN ISO 11654

Blue dashed line: The balancing frequency range

Acoustic Panels

Grooved

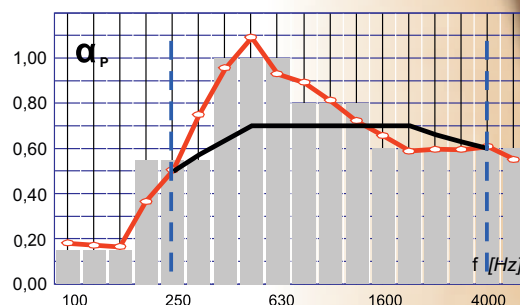


Panel M 4-16/4-32

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	32	25	35

Absorption coefficient: α_w : 0.70

Absorption class: C

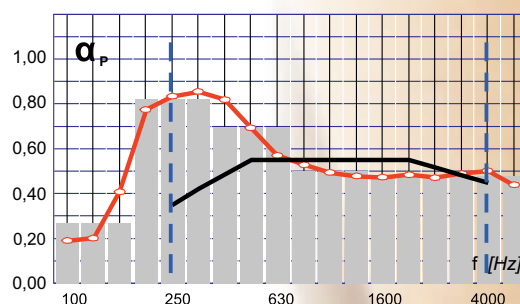


Panel M 4-16/4-64

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	64	25	35

Absorption coefficient: α_w : 0.55

Absorption class: D

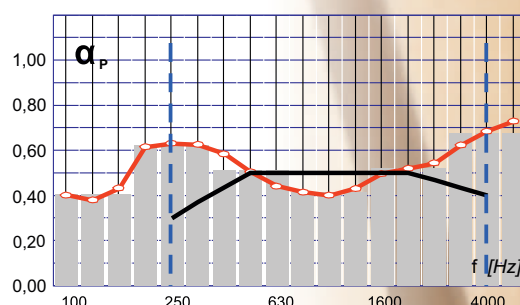


Panel M 4-16/4-192

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	192	25	35

Absorption coefficient: α_w : 0.50

Absorption class: D

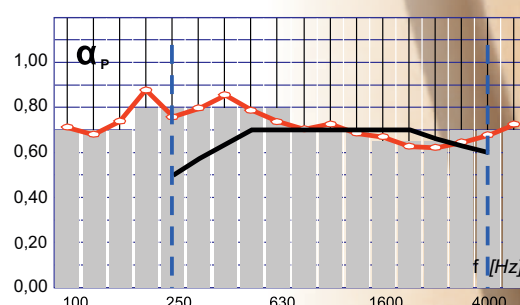


Panel M 4-16/4-16

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	16	25	175

Absorption coefficient: α_w : 0.70

Absorption class: C

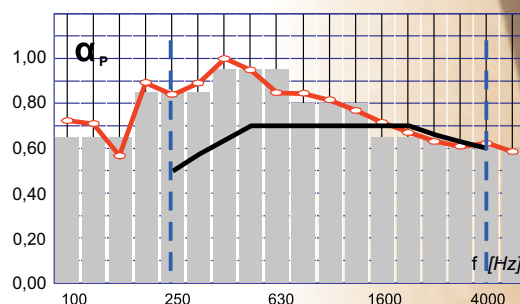


Panel M 4-16/4-32

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	32	25	175

Absorption coefficient: α_w : 0.70

Absorption class: C



■ Predicted sound absorption coefficient octave bands

— Predicted sound absorption coefficient in 1/3 octave bands

— Reference curve by EN ISO 11654

— The balancing frequency range

Acoustic Panels

Grooved

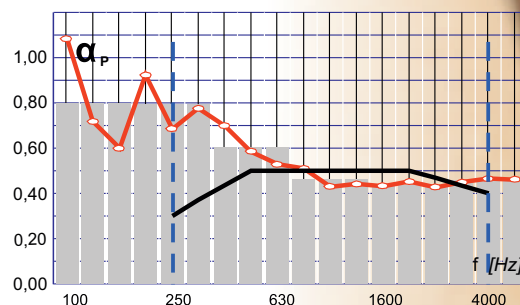


Panel M 4-16/4-64

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	64	25	175

Absorption coefficient: α_w : 0.50

Absorption class: D

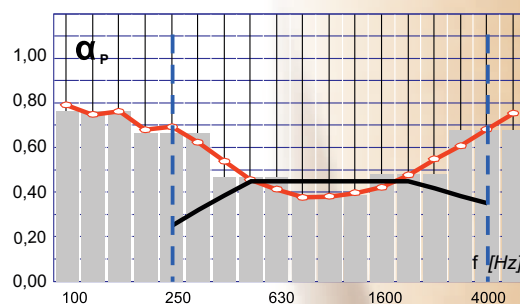


Panel M 4-16/4-192

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	192	25	175

Absorption coefficient: α_w : 0.45

Absorption class: D

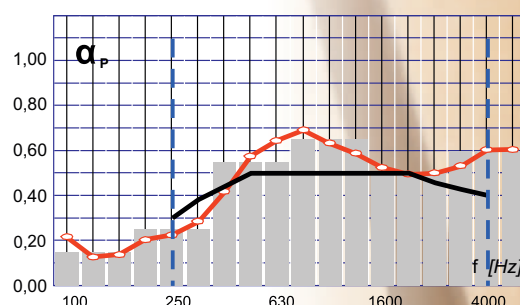


Panel M 4-16/4-16

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	16	0	60

Absorption coefficient: α_w : 0.50

Absorption class: D

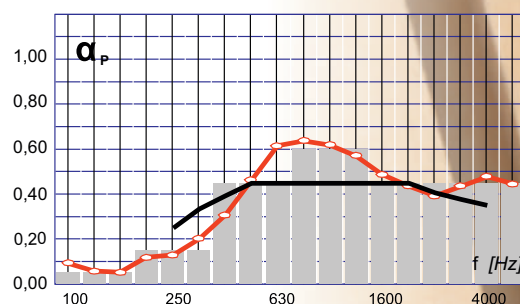


Panel M 4-16/4-32

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	32	0	60

Absorption coefficient: α_w : 0.45

Absorption class: D

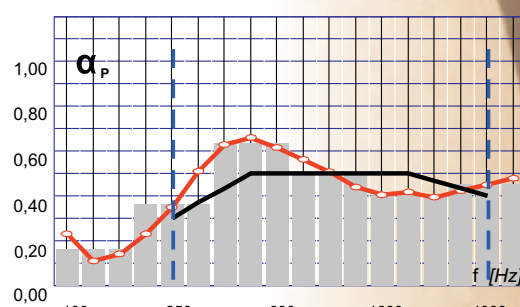


Panel M 4-16/4-64

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	64	0	60

Absorption coefficient: α_w : 0.50

Absorption class: D



Grey bar: Predicted sound absorption coefficient octave bands

Red line: Predicted sound absorption coefficient in 1/3 octave bands

Black line: Reference curve by EN ISO 11654

Blue line: The balancing frequency range

Acoustic Panels

Grooved

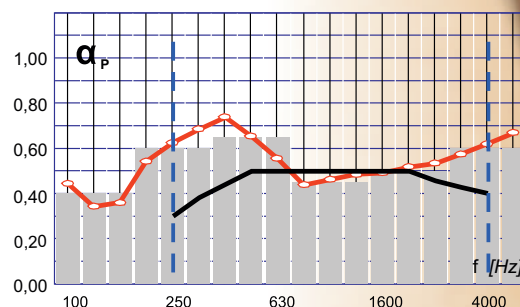


Panel M 4-16/4-16

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	16	0	200

Absorption coefficient: α_w : 0.50

Absorption class: D

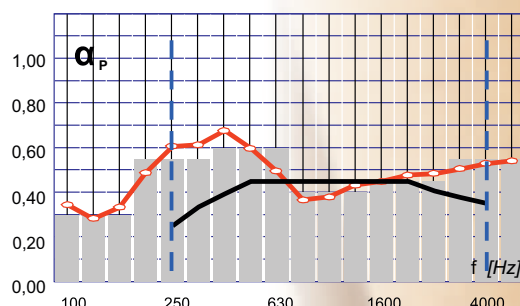


Panel M 4-16/4-32

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	32	0	200

Absorption coefficient: α_w : 0.45

Absorption class: D

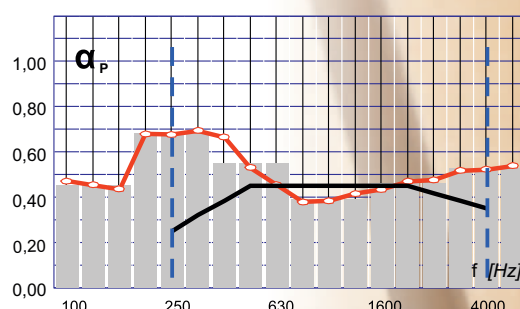


Panel M 4-16/4-64

Plywood	Grooving distance		Mineral wool	Air gap
A	DF	RF	C	D
15	16	64	0	200

Absorption coefficient: α_w : 0.45

Absorption class: D



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