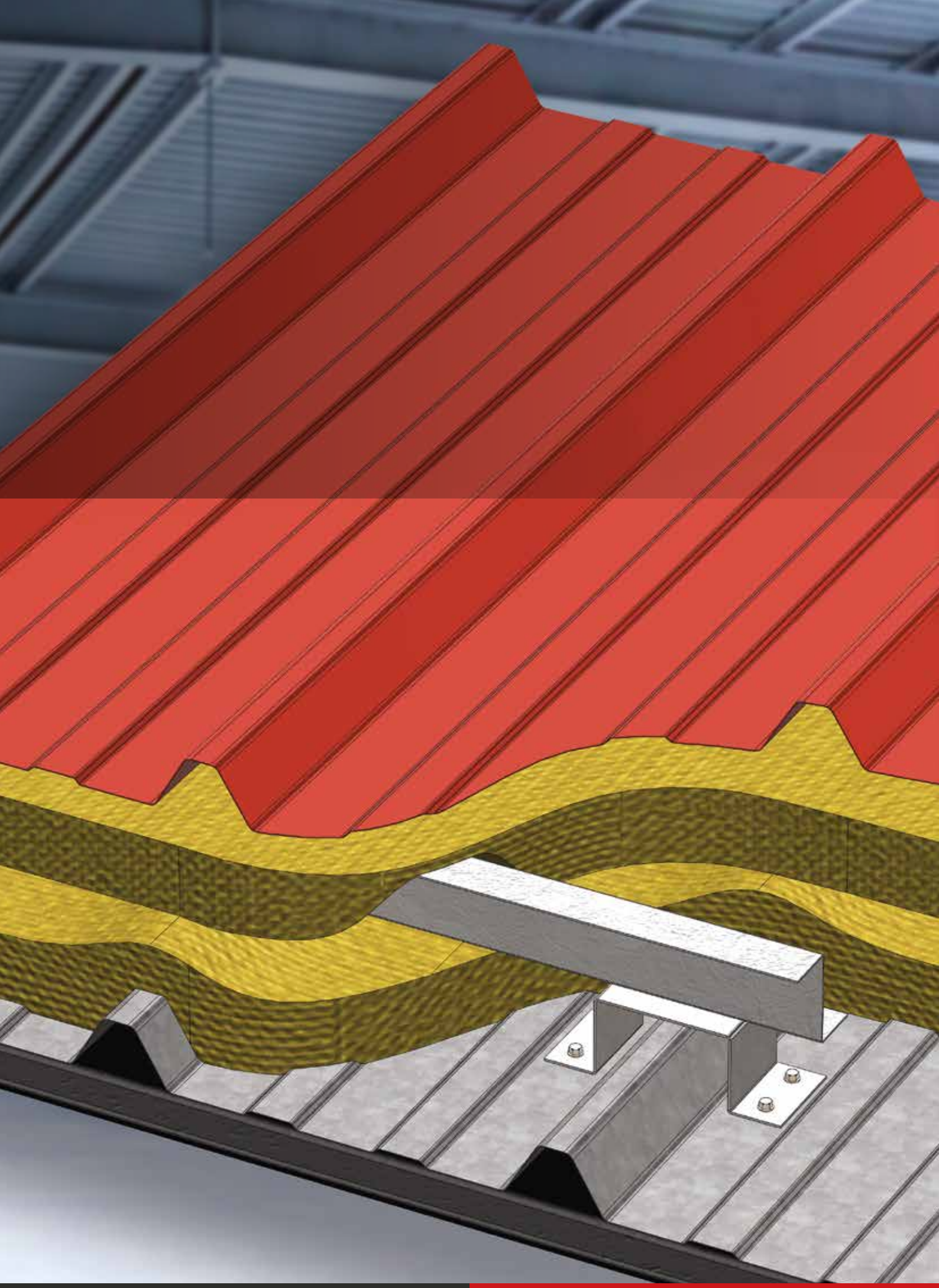
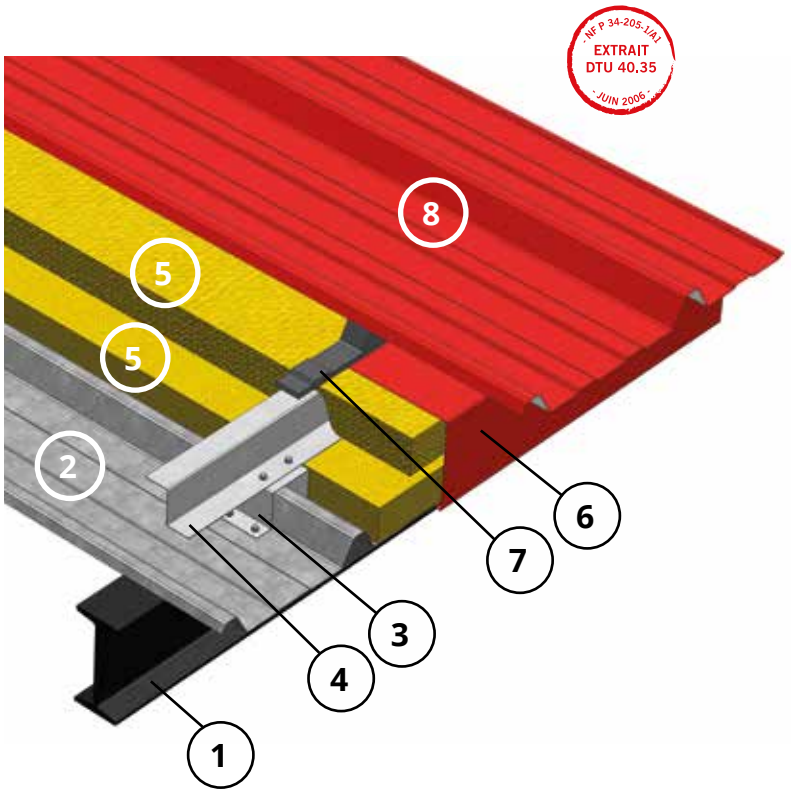
THERMAL ROOFING RENOVATION SOLUTIONS



RENOVATION OF STEEL ROOFING

Roof insulation is an essential stage in roofing renovation work.
It is proven that 30% of the energy loss in a house is through the roof.
In the case of renovation, external insulation makes it possible to insulate or reinforce inadequate existing insulation, while continuing activity inside the building in certain cases and without reducing space.



1- Existing purlin

2- Existing metal cladding

3 - Cross piece

4 - Z spacer

5 - two layers of twill insulation, the second layer is clipped to the Z dummy purlin

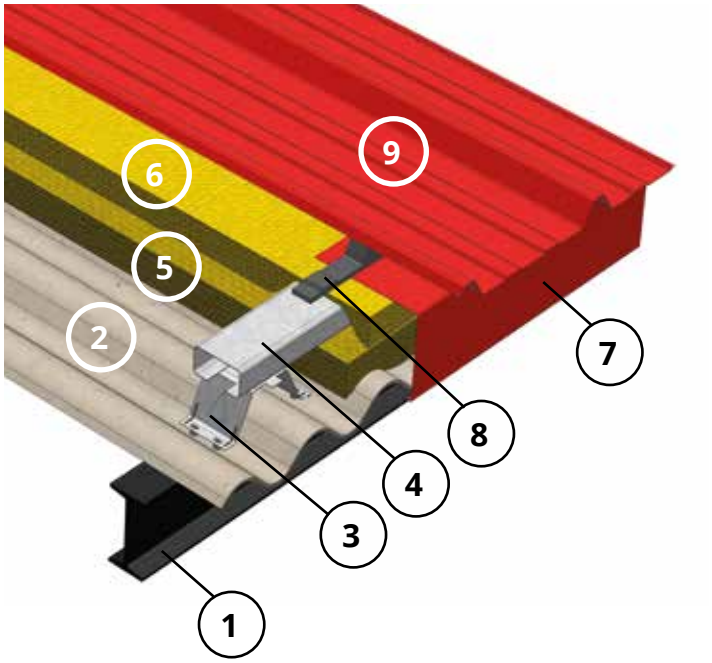
6- Metal profile filler

7 - Foam filler suitable for the roof profile

8 - Covéo roof profile

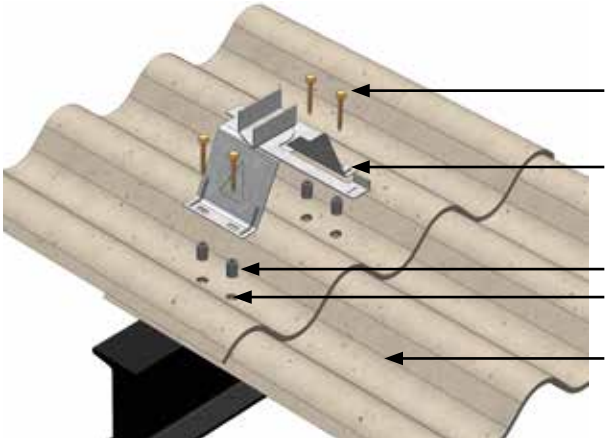
RENOVATION OF A FIBRE CEMENT ROOF

The ISONOV solution is a complete patented and cost-effective solution for renovating an existing fibrocement roof with an over roofing system.



1- Existing purlin
2- Existing fibrocement roofing
3- ISONOV divider
4- Purlin C over-roof
5- Mineral wool insulation, 100 mm thick with vapour barrier between insulating roofing and purlin C
6- Mineral wool insulation, thickness 50 mm, clipped on purlin C
7- Metal profile filler
8 - Foam filler suitable for the roof profile
9 - Covéo roof profile

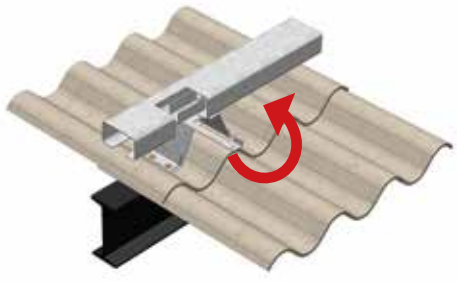
FITTING THE ISONOV DIVIDER



Each project requires a specific study - see information sheet on batiroc.fr.

Refer to the regulations in force concerning cladding containing asbestos.

SAFETY LOCKING PRINCIPLE FOR THE ISONOV DIVIDER

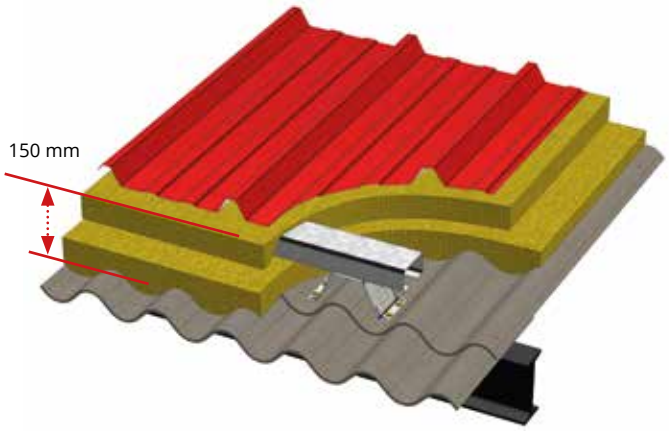


THERMAL SOLUTIONS AND SYSTEMS

The U_p vales (surface transmittance coefficient) and R_p values (wall thermal resistance) are estimated for:
- 2.5 fixtures/m²
- Cross pieces spaced at 1 metre intervals along the purlins for the steel renovation system and 1.65 metres for the fibrocement system
- Mineral wool insulation conductivity λ= 0.04 W/m.K maximum

The ISONOV procedure is implemented according to the technical file and each site undergoes a separate study

C.40.RÉNO.F



EXISTING FIBROCEMENT ROOF

- Purlin on structure
- Fibrocement profile to renovate, span 1.325 m (profile generally 177/51 6.0 mm thick

+

RENOVATION

- ISONOV spacer, [a]
- Insulation laid over Fibrocement thickness 100 mm
- BATICÉ PROFILE, thickness 2.0 mm [a]
- Insulation fixed on BATICÉ, thickness 50 mm
- Roofing profile[a]

U_p 0.40 — SURFACE TRANSMITTANCE COEFFICIENT

R_p 2.36 — THERMAL RESISTANCE OF THE WALL

U_p(W/m².K)	0.45	**0.40**	0.39	**0.38**	0.36
R_p(m².K/W)	2.10	**2.36**	2.42	**2.50**	2.60

C.38.RÉNO.A

EXISTING METAL ROOF

- Purlin on structure
- Ribbed metal profile to be renovated

+

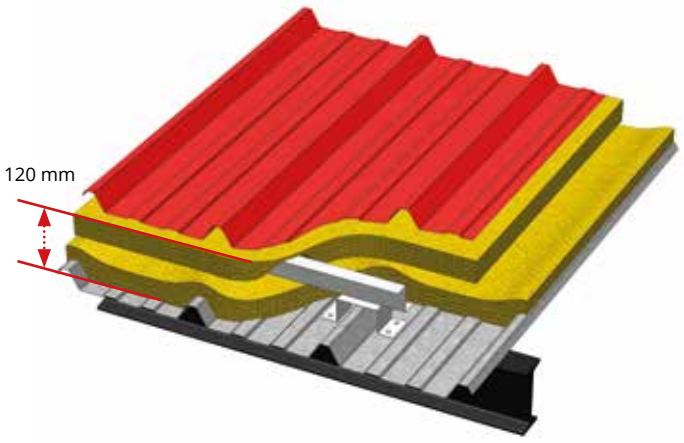
RENOVATION

- Oméga spacer [a]
- Insulation laid on metal profile 60mm thick
- Z spacer[a] (Distance between centres 2.5m)
- Insulation fixed on Z, 60mm thick
- Roofing profile[a]

U_p 0.38 — SURFACE TRANSMITTANCE COEFFICIENT

R_p 2.50 — THERMAL RESISTANCE OF THE WALL

The renovation solutions can be used on new buildings



(a) Subject to mechanical verification

THERMAL SOLUTIONS AND SYSTEMS

These renovation solutions can be used on new buildings

C.34.RÉNO.A

EXISTING FIBROCEMENT ROOF

- Purlin on structure
- Ribbed metal profile to be renovated

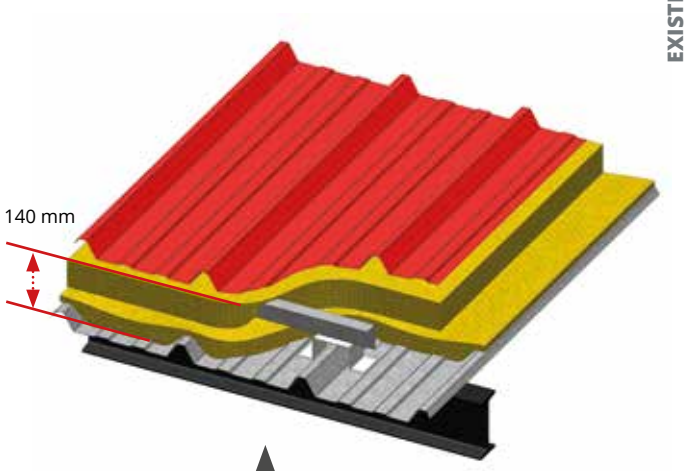
+

RENOVATION

- Oméga strut [a]
- Insulation unrolled over metal profile, thickness 70 mm
- Z folded dummy purlin [a] (Clearance 2.5m)
- Fastened insulation, 70mm thick
- Roof profile [a]

U_p 0.34 — SURFACE TRANSMITTANCE COEFFICIENT

R_p 2.80 — THERMAL RESISTANCE OF THE WALL



0.34	0.32	0.29
2.80	3.00	3.30

C.29.RÉNO.A

EXISTING METAL ROOF

- Purlin on structure
- Ribbed metal profile to be renovated

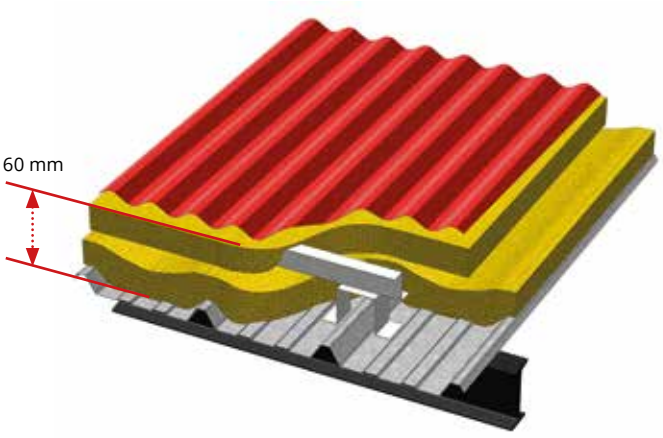
+

RENOVATION

- Oméga spacer [a]
- Insulation unrolled over profile, thickness 80 mm
- Z folded dummy purlin [a] (Clearance 2.5m)
- Clamped insulation, 80mm thick
- Roof profile [a]

U_p 0.29 — SURFACE TRANSMITTANCE COEFFICIENT

R_p 3.30 — THERMAL RESISTANCE OF THE WALL



(a) Subject to mechanical verification

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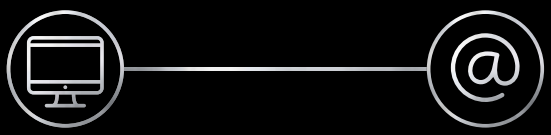

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