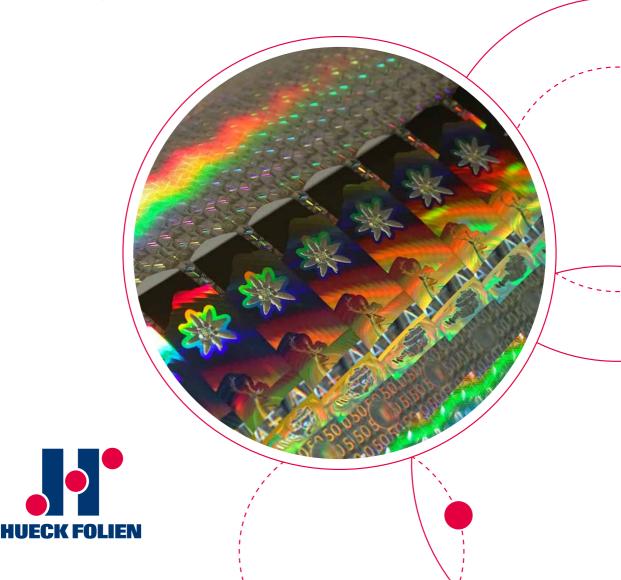
AUSTRIAN ALPS

Nanoengineered holographic stripe

Since more than 30 years HUECK FOLIEN is producing holographic stripes and threads for banknotes. Over the years holographic embossing technologies have constantly developed and new holographic features have been generated. Todays origination technology goes far beyond standard rainbow holograms. Nanoengineered structures are created by state-of-the-art origination technology to receive completely new effects in 3D and moving elements. Our partner IQ Structures has a wide portfolio of hologram effects. The latest holographic features are shown on our "Austrian Alps holographic stripe".

The HUECK FOLIEN "Austrian Alps" sample stripe shows a combination of state-of-the-art-effects: a "White 3D bas-relief" in opposition to a "Rainbow 3D bas-relief", the "Full3D keyhole effect", a "Full3D magnifying lens effect" and the movement in the "Swap Parallax effect".

Finally the combination with HUECK FOLIEN'S TRILUMIC® UV printing on the backside of the stripe, raises the holographic stripe from a public level I feature to a level 2 security feature on the banknote.



White 3D bas-relief effect This effect uses achromatic nanogravuretechnology to create reflective 3D bas-relief with horizontal axis. It is applied to high level of detail. The effect appears as a white glossy surface and is well visible under any kind of illumination including diffuse daylight. It is applideto the stripes of the decorative patternand the flower shape. 3D bas-relief surface. It is best **Expansion kinetic effect** Effect appears as a transition of light. Due to non-linear grating a color along the shape when hologram is tilted in horizontal axis. Full3D keyhole effect A real 3D effect of eagle with circles floating below the area located in the plane of the vertical parallax the image will hologram. When tilting the hologram, all the details of the image can be observed. Full3D magnifying lens 3D magnifier lens effect enlarging part of the text "50"

Visualisation

Linear kinetic effect

Effect appears as a transition

of a color along the shape

when hologram is tilted in

the background (lines of the

viewed in point light, but it

is well visible even in diffuse

technology serves as a strong

Swap Parallax effect Effect appears as wireframe shape movingon the surface

of the hologram in swapped

observer tilts the hologram in

move in horizontal direction

and vice versa. The effect is

applied to the text "AT".

parallax manner. I.e. if an

security element.

decorative pattern).

Rainbow 3D bas-relief effect Diffractive CGH based effect appears as extremely bright



Hologram



View under UV-light front side



Trilumic® under UV-light

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