Dot Stability Index
Of FAG Flex³ PRO Software
by Lukas Pescoller, 13.04.2010

Dot Stability Index calculation
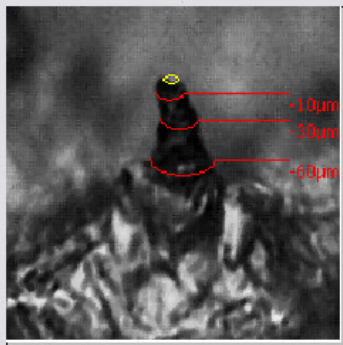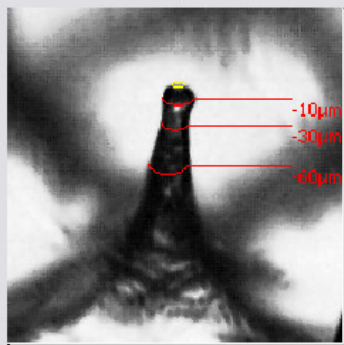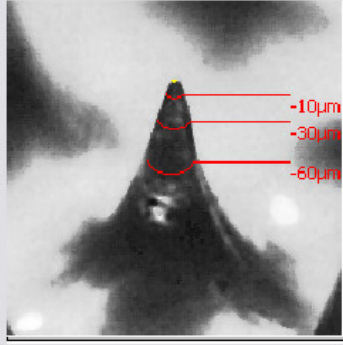
In order to offer an easy to understand function in checking the minimum dot, there has been defined the Dot Stability Index. The dot stability index shows the probability that the dot itself will be stable enough to print a proper dot during the run of the job. The Index is classified in

This dot will not print for a long time

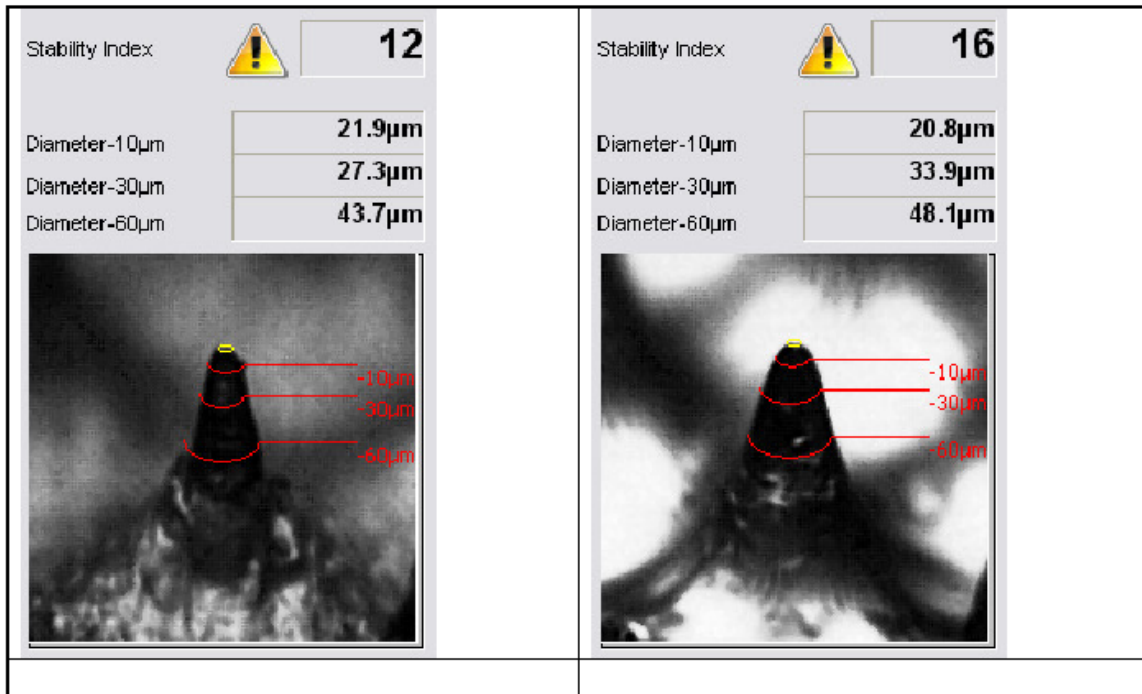it is not very probable that this dot will be good enough to print during the entire run of the job.
☐ Dot stability = -1 if the dot is not vertical but slanting to one side
☐ Dot stability = -1 if the dot gets smaller inside the relief
☐ Dot stability between 1 and 9 : Dot shape is regular but probably to steep

Plate Type	Standard Plates		Plate Type	Standard Plates		Plate Type	Standard Plates
Stability Index	**-1**		Stability Index	**-1**		Stability Index	**8**
Diameter-10μm	19.7μm		Diameter-10μm	20.8μm		Diameter-10μm	10.9μm
Diameter-30μm	25.1μm		Diameter-30μm	16.4μm		Diameter-30μm	20.8μm
Diameter-60μm	42.6μm		Diameter-60μm	25.1μm		Diameter-60μm	31.7μm

Slanting dot example | -30 μm diameter is smaller than -10 μm diameter |

FAG GRAPHIC SYSTEMS SA   CH 1003 Lausanne   www.fag.ch sales@fag.ch
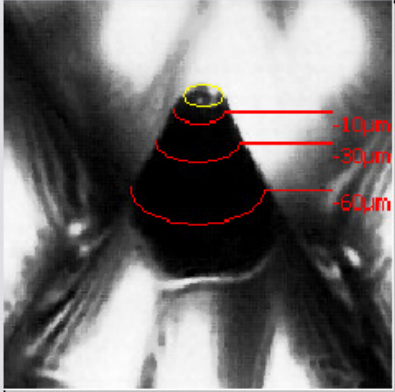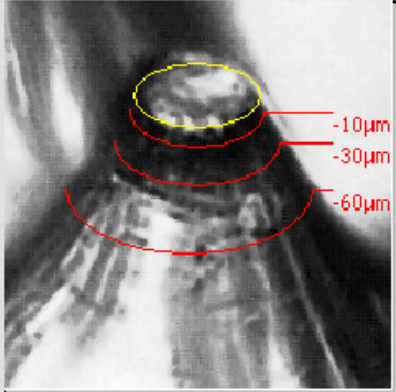
⚠️ *It depends on other criteria's, if this dot will print stable.*

It can not be determined for sure, if this dot will print for the entire run of the job. It can depend on plate material, printing substrate, pressures, etc. A closer look at these dots is recommended

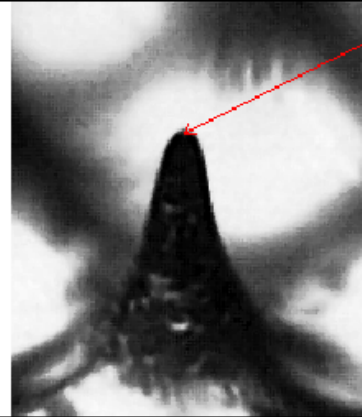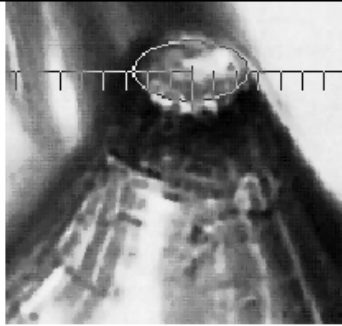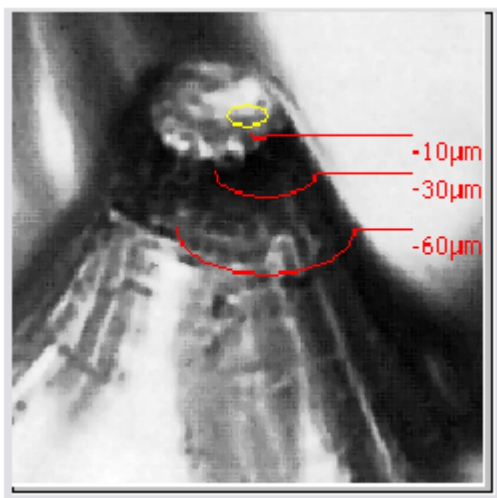| Stability Index	⚠️	12
Diameter-10µm		21.9µm
Diameter-30µm		27.3µm
Diameter-60µm		43.7µm

Stability Index	⚠️	16
Diameter-10µm		20.8µm
Diameter-30µm		33.9µm
Diameter-60µm		48.1µm

It is quite probable that this dot will print reliably

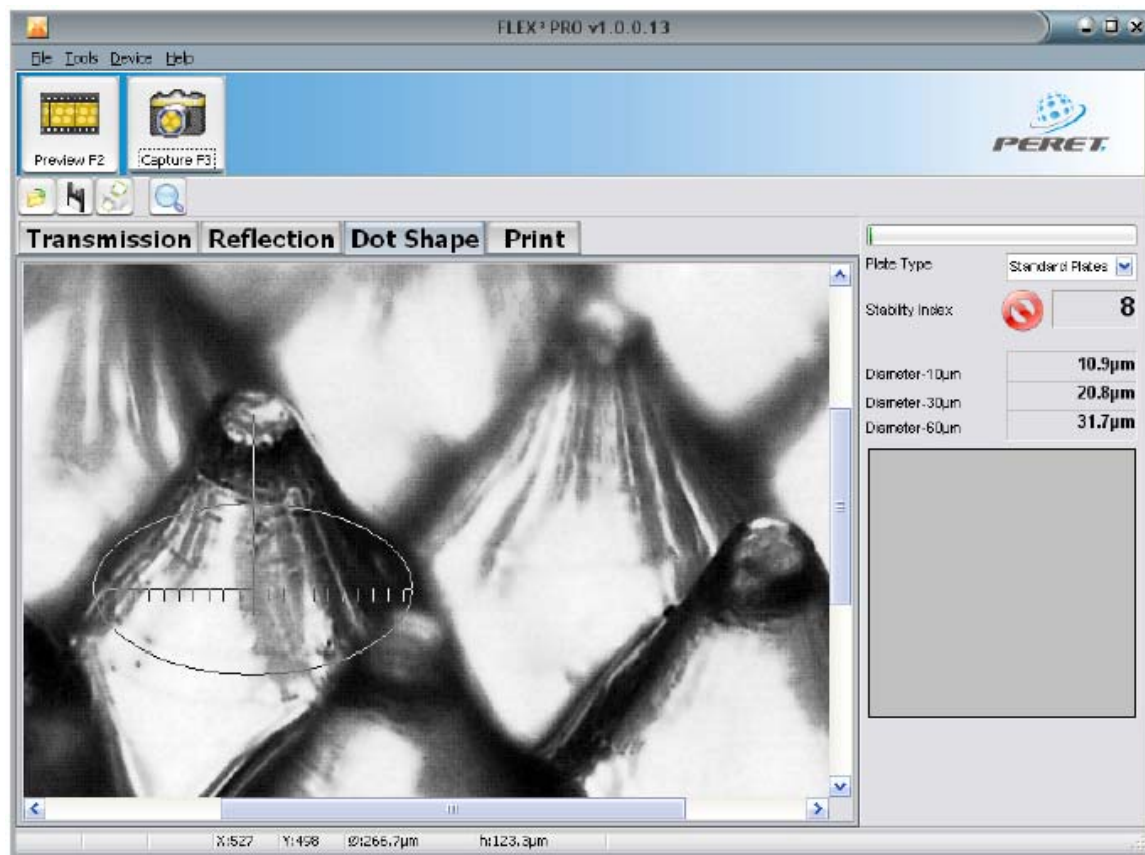|	
Plate Type — Standard Plates	Plate Type — Standard Plates
Stability Index — **40**	Stability Index — **115**
Diameter-10µm — 30.6µm	Diameter-10µm — 76.6µm
Diameter-30µm — 47.0µm	Diameter-30µm — 94.0µm
Diameter-60µm — 76.5µm	Diameter-60µm — 141.0µm
A green flag tells you that it is quite probable, that the dot will print reliable	In this case a visual only check will tell you immediately, that the dot is solid enough to print reliable

How the analysis is started

On small dots, if no real surface is visible, a click inside the black area just below the top of the dot will start the analyses of the selected dot.	If the dot surface is available, move the mouse pointer into the middle of the dot surface and press the left mouse button. Keep the left mouse button depressed while dragging the mouse up and down, left and right until the ellipse does surround the dot surface. Release the mouse button to execute the measurement calculation

If you pick the wrong position or the dot is not a minimum dot any more, than the displayed result will be invalid. You can see this by checking the red arcs showing the measurement position on various relief depths.

This example shows, that the red arcs are not surrounding the dot. Therefore the measurement result data is invalid.

Pressing the left mouse button down and moving the mouse will show a horizontal ruler and an ellipse. In the status line on bottom there will be displayed the diameter of the ellipse and the height <h:> of the vertical line. The diameter of the ellipse shows the distances in a top view corrected by the image projection (surface distance). The height is the vertical distance on the plate, corrected by the image projection. Above Image therefore displays, that the base diameter of the dot at the touching level between the dots is 266,m while the dots are touching each other on a relief depth of 123 ,m.