

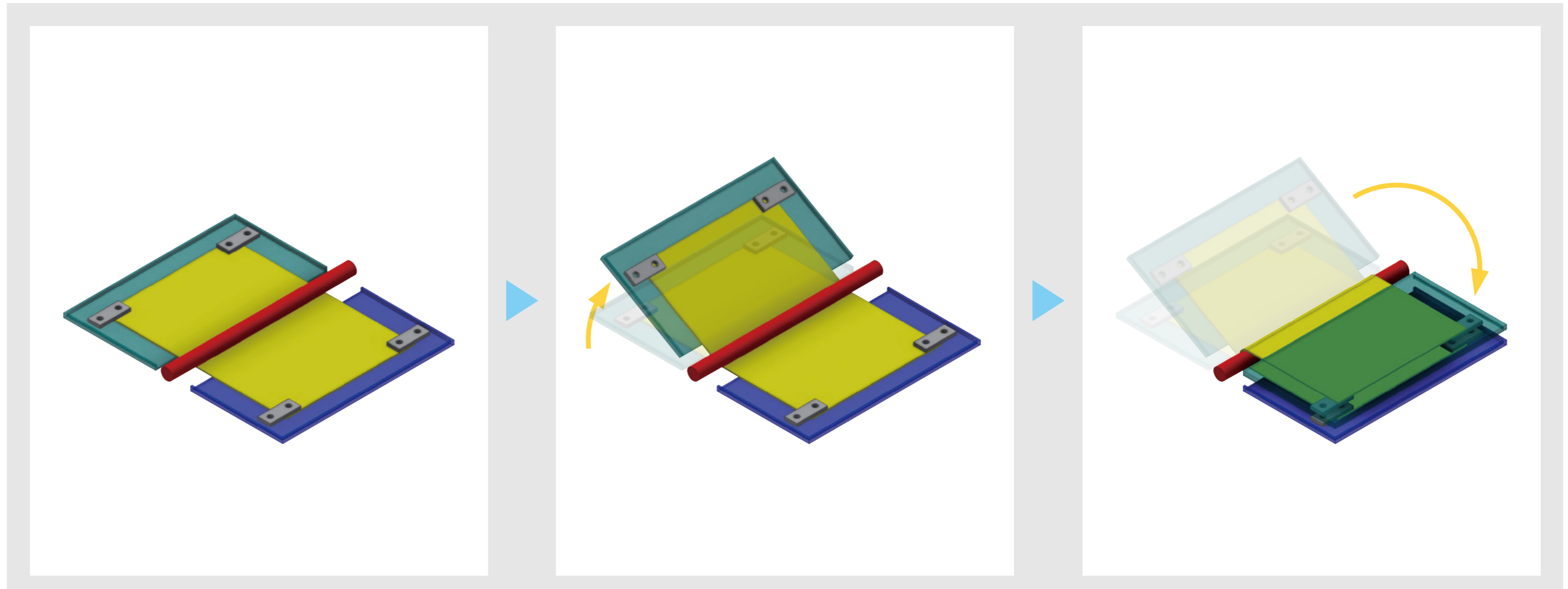
Acquire Accurate Data Than IEC International Standard Test Method

This endurance testing system DLDMLH-FS is our original equipment which improved for getting further accurate evaluation data based on test method mentioned IEC 62715-6-1(Flexible display devices-Part 6-1:Mechanical stress test methods) established by specialist committee TC110/WG8 of IEC International Electrotechnical Commission on February 2014.

1 Motion of IEC 62715-6-1 test example

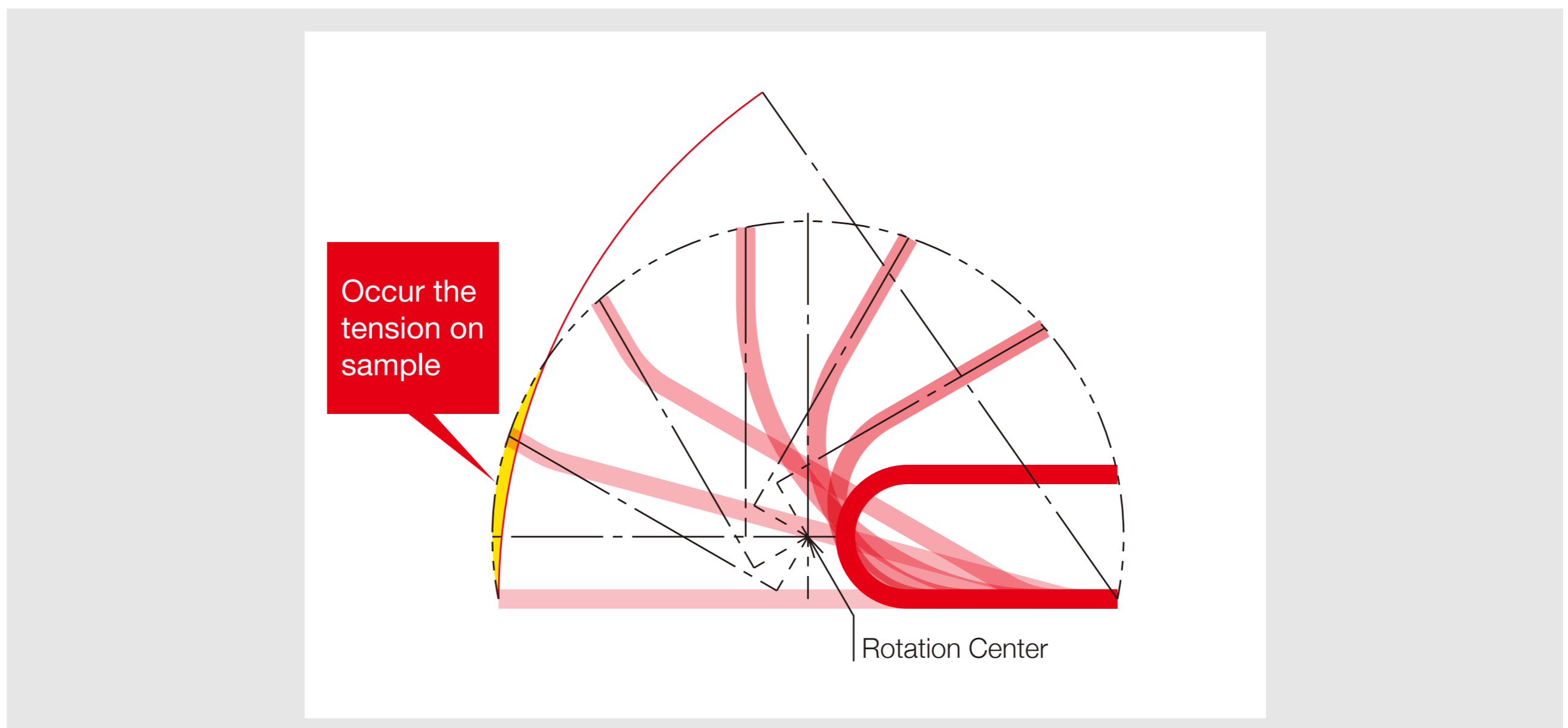
This test standard separates in 4 groups, e.g. "bending""rolling""torsion""tension". When we implement the endurance test according to test example mentioned "bending", we can devise the test equipment like right figure. [\(note\)](#)

[\(note\)](#) This standard is not deciding the specific test method, it just specifies the test condition which should keep bending radius constantly etc. The test example is a supplementary image for understanding test standard.



2 Sample motion and problems

With this test apparatus, the large tension occurs on the sample at the same time as starting the test. To understand the cause of this phenomenon, drawing a circle which is radius of sample length on the motion track of test machine such as right figure helps to you. In the yellow area, sample length is shorter than moved track of clamp. With using the rod, this phenomenon become conspicuous. For reason of these, unexpected breaking or dispersion of test data appear.

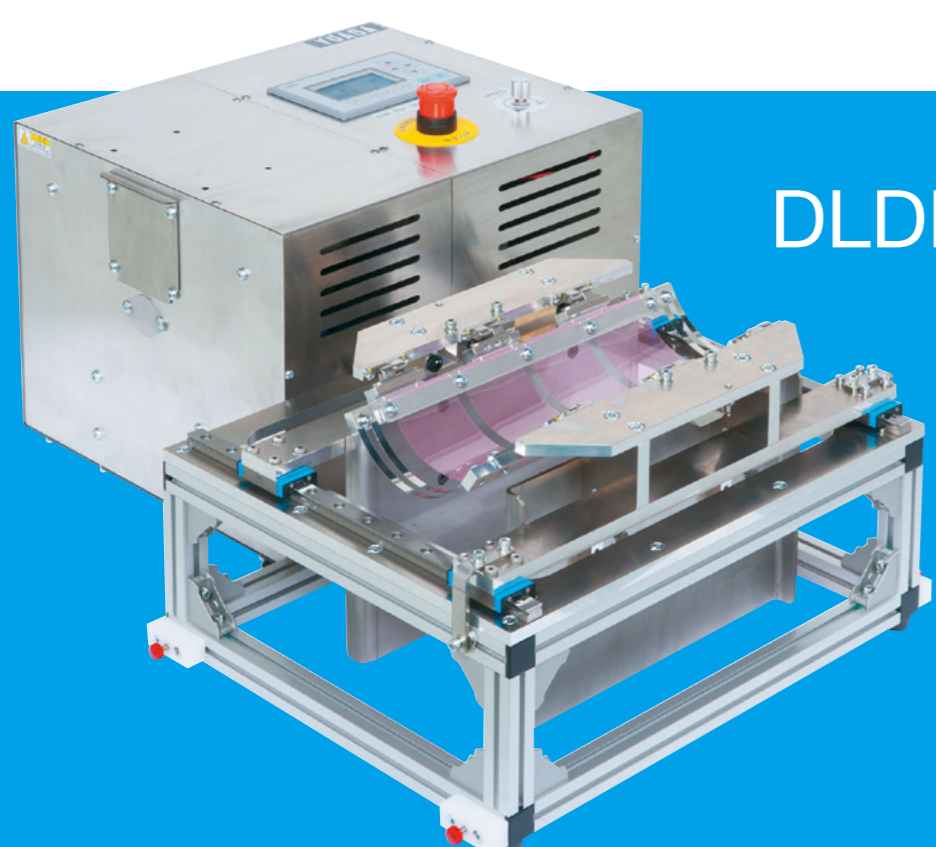
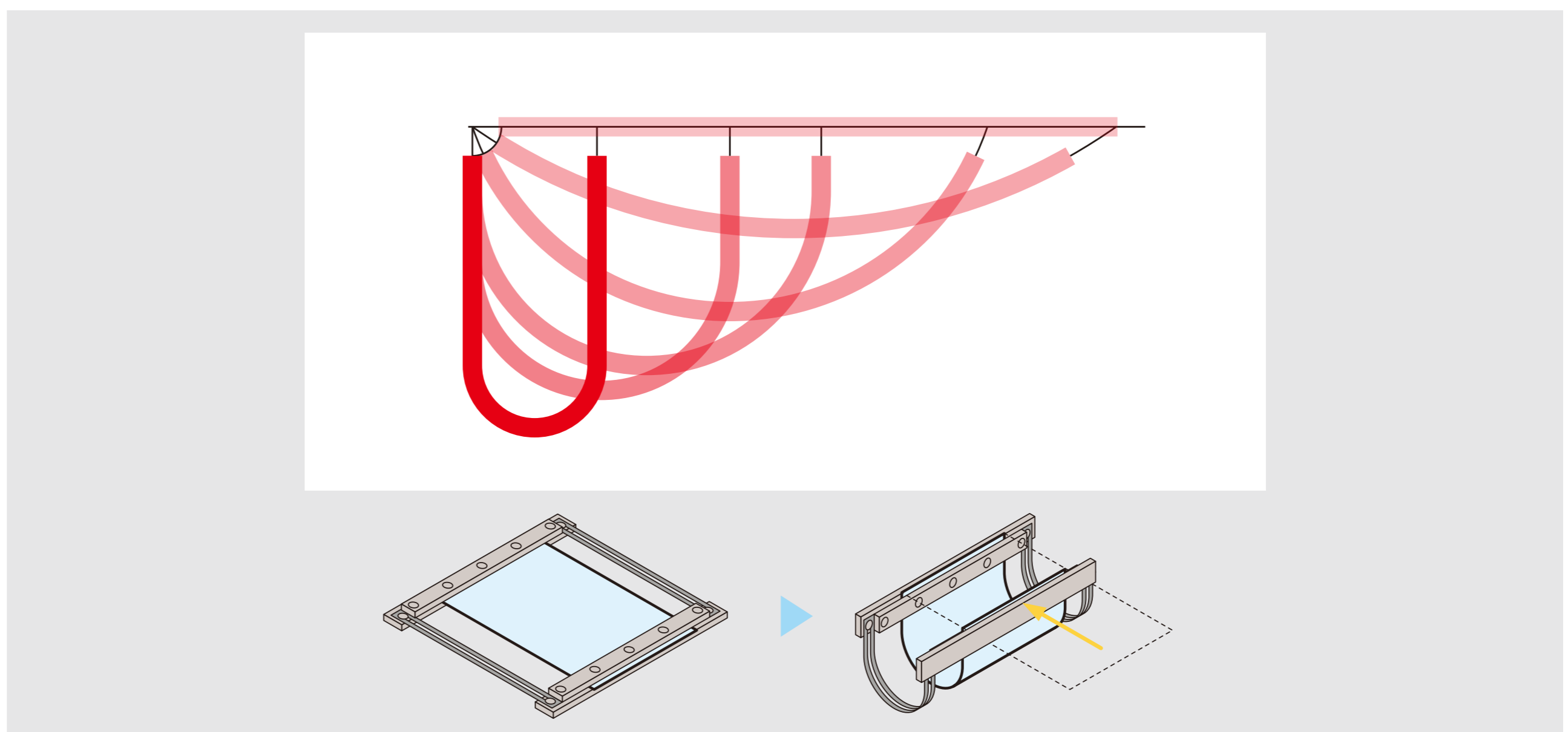


3 Improved method

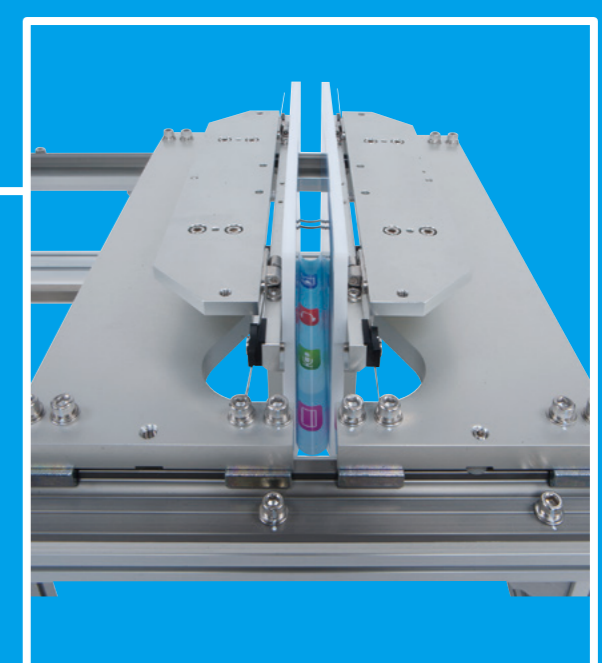
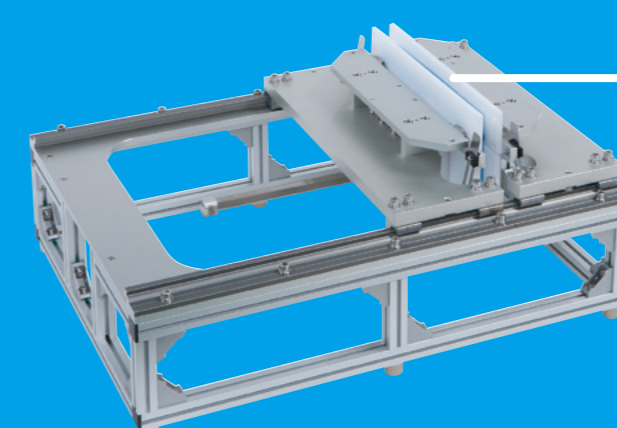
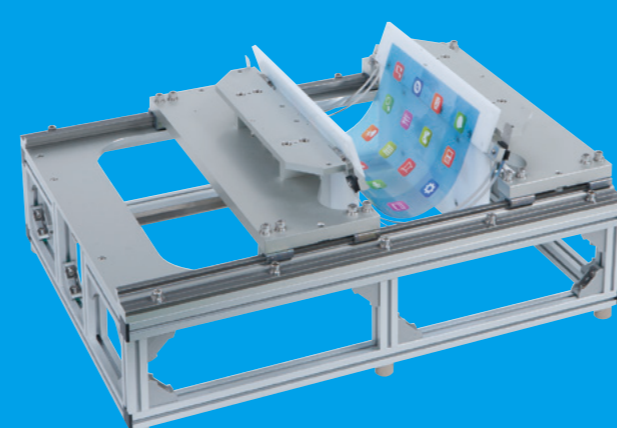
YUASA's product DLDMLH-FS does not occur the tension on a sample except self-weight. This test machine consists of Tilt Clamp [\(note 1\)](#) which tilts according to sample's deformation, and Tilt Controller [\(note 2\)](#) which controls the tilt clamp's incline. It is extremely unlikely that sample length is deficient, because this two tilt clamps get closer in a straight line. For this technique, sample repeats to deform very naturally without dispersion.

[\(note 1\)](#) Tilt Clamp: A clamp which changes the angle according to sample's deformation.

[\(note 2\)](#) Tilt Controller: A part which controlled the tilt clamp's incline ideally.



DLDMLH-FS Desktop Model Endurance Testing Machine Tension Free U-shape Folding Test



The pressing plate can make tiny bending radius compulsorily.