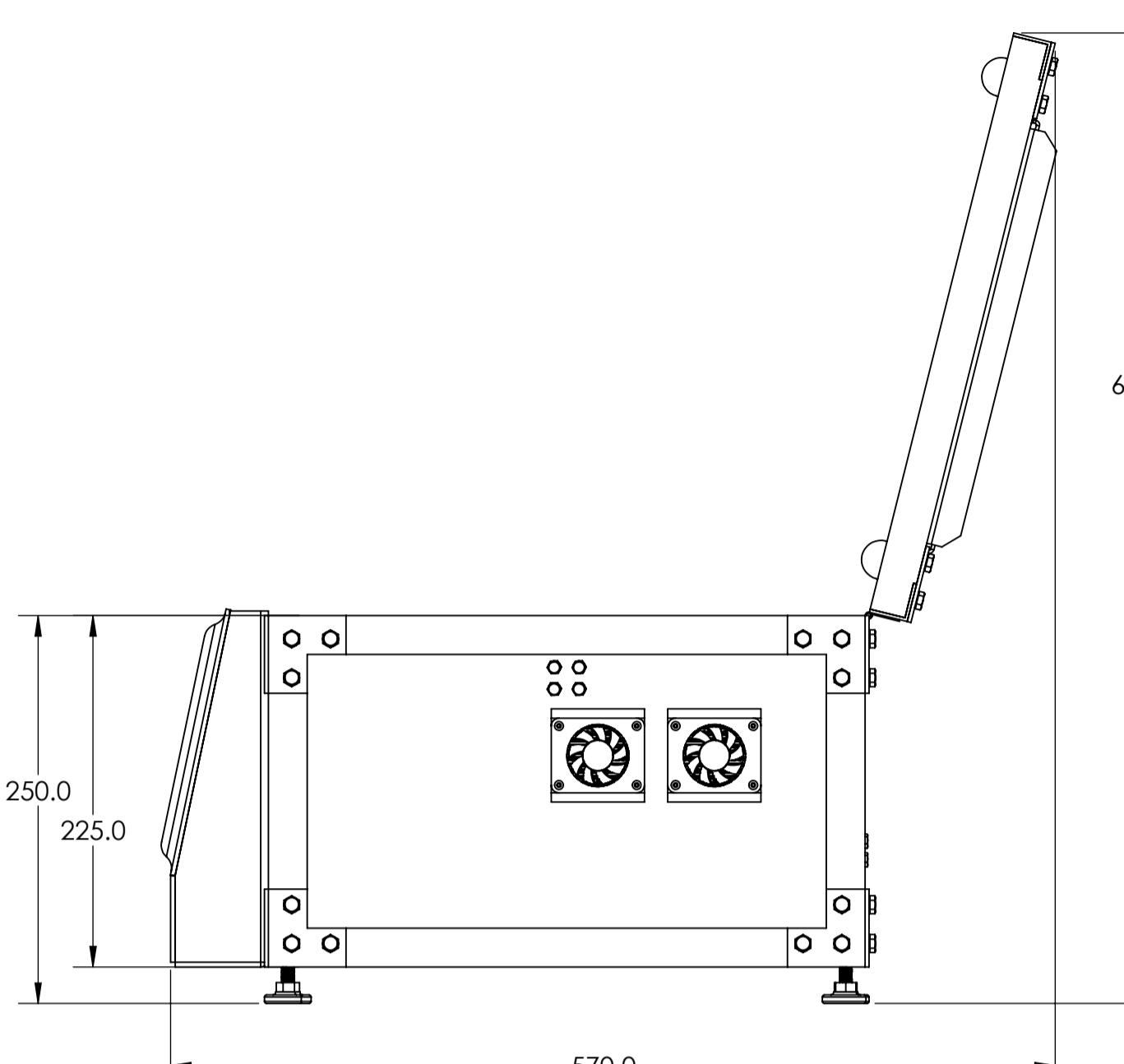
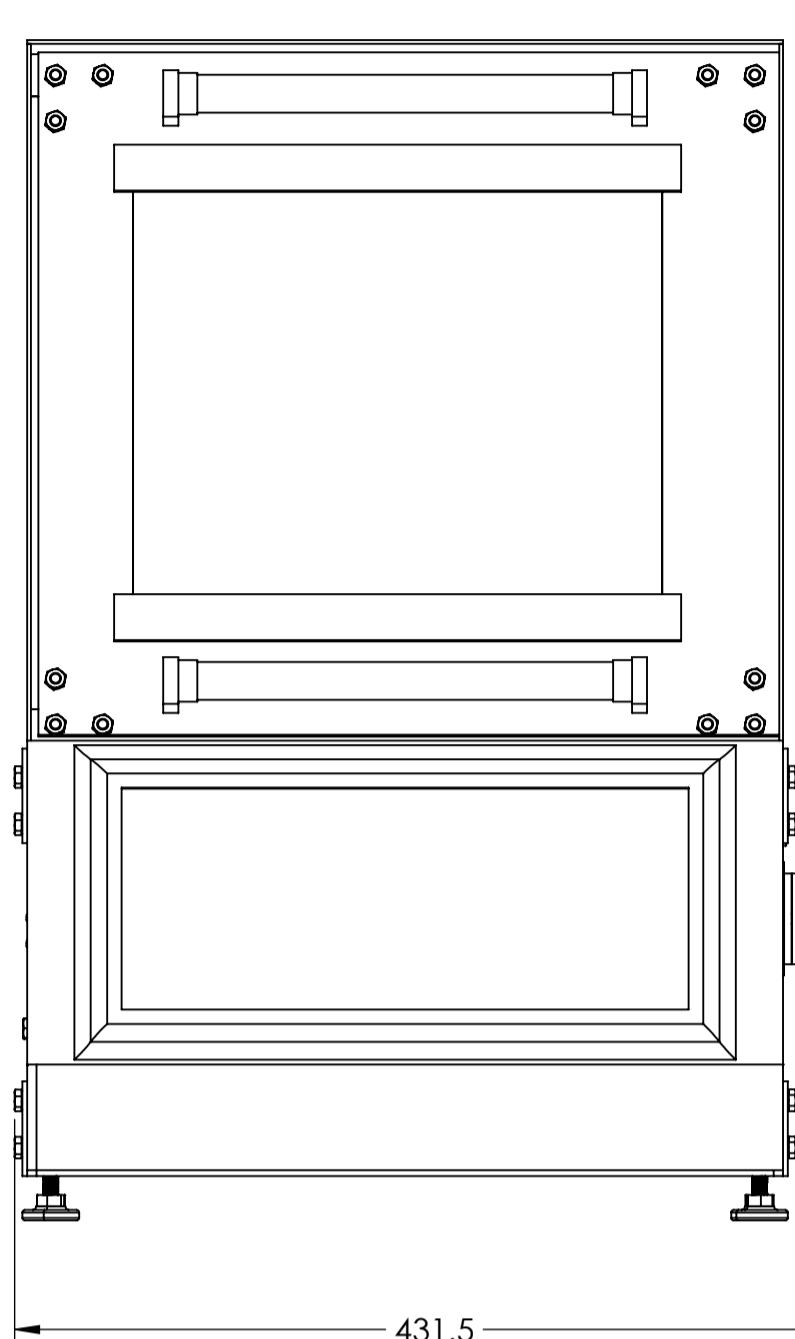


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## General Description

The multi-parameter desktop device for meat freshness and quality assessment is a compact, experimental system designed to compare and optimize different meat evaluation techniques. It integrates ultrasound, optical, and mechanical measurements to assess key parameters such as water-holding capacity (WHC), fat content, elasticity, pH, and color. By identifying overlapping or redundant methods, the device streamlines meat quality testing, ensuring efficient, non-destructive, and accurate analysis for both research and industrial applications.

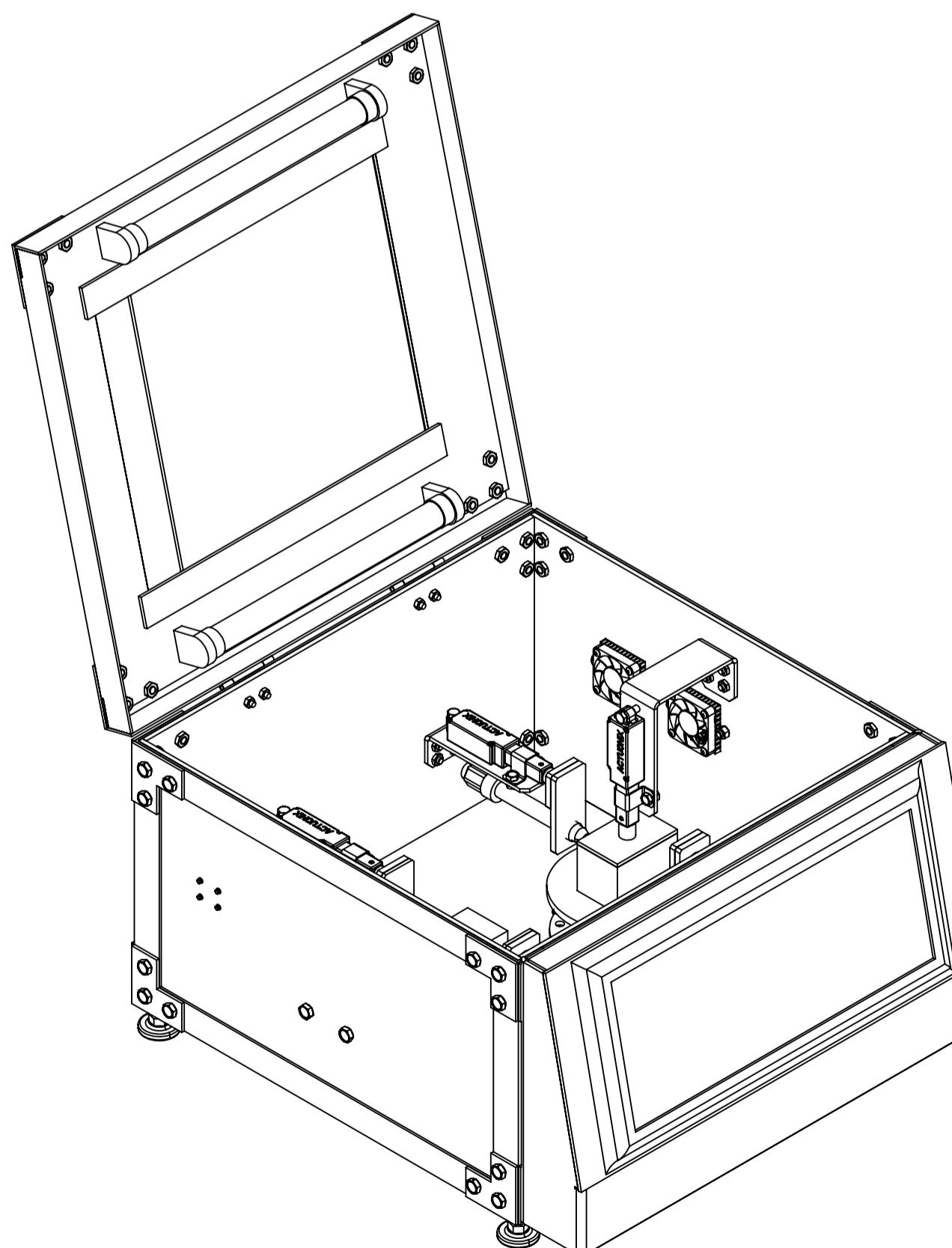
In the open mode, the device has dimensions of 625 mm in height, 570 mm in width, and 431.5 mm in length.

The maximum height of the device is 640 mm at its highest point.

## Technical parameters

1. The device can hold specimen Size: 60mm × 40mm × 40mm
  2. Operating Temperature: 15°C – 23°C ( $\pm 0.2^\circ\text{C}$  accuracy)
  3. Water-Holding Capacity (WHC): Ultrasound (70% – 80% water by weight)
  4. Elasticity: Force & deformation analysis (50N – 200N range)
  5. pH: Glass electrode sensor (0 – 14 pH,  $\pm 0.01$  accuracy)
  6. Color: RGB Camera (30.4 MP,  $\Delta E < 2$ , 6500K light source)

This technical drawing illustrates a vertical mechanical assembly, likely a cylinder or actuator system, mounted within a frame. The assembly features two large circular components at the bottom, each connected to a vertical rod. These rods are attached to rectangular blocks labeled 'ACTUATOR'. The entire assembly is supported by a central vertical column. On the left side, there is a vertical dimension line indicating a total height of 450.0, with a tolerance range of 380.0 to 450.0. On the right side, another vertical dimension line shows a height of 60.0, with a tolerance range of 60.0 to 70.0. The drawing uses standard engineering conventions like arrows for direction and numbers with tolerances for precise measurements.



UNLESS OTHERWISE SPECIFIED: DIMENSIONS ARE IN MILLIMETERS SURFACE FINISH: TOLERANCES: LINEAR: $\pm 0.1\%$ ANGULAR:		FINISH:			DEBURR AND BREAK SHARP EDGES	DO NOT SCALE DRAWING	REVISION
Riga Technical University							
DRAWN	NAME S. M Jayawickrama	SIGNATURE	DATE			TITLE: General drawing of the multi-parameter desktop device for meat freshness and quality assessment (GD)	
CHK'D	Aleksejs Tatarinovs						
CHK'D	Hermanis Sorokins						
APP'D	Jurijs Dehtjars						
Q.A	Nicole Burovaja			MATERIAL:	DWG NO.	IP.005.00.000.GD	A1
					SCALE:1:4	SHEET 1 OF 1	