

HIGH PRESSURE FOAM ANALYZER – HPFA

SPECIFICATIONS



KRÜSS

Advancing your Surface Science

Product group specifications

HPFA

Height camera

Connection	USB 2.0
Performance	5 fps at 1280 × 1024 px
Spatial resolution	200 dpi 0.12 mm/px
Mean field of view	85 × 5.2 mm ²
Focus	manual

Structure camera

Connection	USB 2.0
Performance	2 fps at 1280 × 1024 px
Mean field of view	25 × 13 mm ²
Diameter of minimum detectable bubble	150 μm
Focus	manual

Illumination for height detection

Type	LED (blue)
Wave length, dominant	469 nm

Illumination for structure detection

Type	LED (red)
Wave length, dominant	633 nm

Software

ADVANCE	foam analysis – high pressure
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Measurement specifications

HPFA

Analyzed foam characteristic	foamability and foam stability	foam structure: homogeneity, stability and aging
Results	<ul style="list-style-type: none">■ foam height■ liquid height■ total height■ foam capacity¹⁾■ maximum foam density■ expansion rate■ foam half life time■ drainage half life time■ sample temperature■ gas temperature■ pressure	<ul style="list-style-type: none">■ mean bubble area■ bubble count per mm²■ standard deviation of mean bubble area■ bubble size distribution■ bubble count half life■ Sauter mean radius■ final foam structure

¹⁾ additional flow sensor needed

General specifications**HPFA****Pressure control**

Maximum pressure 350 bar (5000 psi)

Temperature control

Type electrical
Range room temperature up to 120 °C

Temperature sensor

Sensor 1 thermocouple (1 additional thermocouple available)
Location in the high-pressure cell (top/middle/bottom)

Mini dosing system

Dosing manual
Location in the high-pressure cell (top/middle/bottom)
Temperature maximum 180 °C

Environment

Temperature operating: 10 to 40 °C
Humidity without condensation

Instrument dimensions

Footprint 1090 mm × 630 mm (W × D)
Height 1040 mm
Weight (without accessories) ca. 100 kg

Power for HPFA

Voltage 100 to 240 VAC
Power consumption maximum 30 W
Frequency 50 to 60 Hz

Power for heating

Voltage 115/230 VAC
Power consumption maximum 1880 W
Frequency 50 to 60 Hz

Interfaces

PC 1 × USB 3.0

Accessories

Filter plates for sparging Diameter: 30 mm
Filter plate porosities G2: nominal maximum pore size: 40 to 100 µm (recommended)
G3: nominal maximum pore size: 16 to 40 µm
G4: nominal maximum pore size: 10 to 16 µm
Material of columns and frits borosilicate glass (norm: ISO 4793)
Material of sealings PTFE with glass fibers (inner) and graphite (outer) for the windows
HNBR for the filter plates

