

High Pressure Foam Analyzer

HPFA

Specifications



Product group specifications

HPFA

Height camera

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

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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Software languages

Chinese (simplified), English, French, German, Japanese, Korean, Portuguese, Russian, Spanish

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 capacity (with additional flow sensor) ■ 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

General specifications

HPFA

Pressure measurement	
Maximum pressure (with additional syringe pump)	350 bar (5000 psi)
Temperature control	
Type	electrical
Range	from room temperature up to 120 °C
Temperature sensor	
Sensor	1 thermocouple
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	
Operating temperature	10 to 40 °C
Humidity	without condensation
Instrument dimensions	
Footprint	1100 mm × 640 mm (W × D)
Height	1070 mm
Weight (without accessories)	ca. 190 kg
Power supply for HPFA	
Voltage (AC)	100 to 240 V
Power consumption	maximum 30 W
Frequency	50 to 60 Hz
Power supply for heating	
Voltage (AC)	115/230 V
Power consumption	maximum 1880 W
Frequency	50 to 60 Hz

General specifications

HPFA

Interfaces

PC min. 1 × USB 3.0, recommended 2 × USB 3.0 and 1 × USB 2.0

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