

# 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 <sup>2</sup>
Focus	manual

##### Structure camera

Performance	2 fps at 1280 × 1024 px
Mean field of view	25 × 13 mm <sup>2</sup>
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

## Measurement specifications

## HPFA

Analyzed foam characteristic	foamability and foam stability	foam structure: homogeneity, stability, and aging
Results	<ul style="list-style-type: none"> <li>■ foam height</li> <li>■ liquid height</li> <li>■ total height</li> <li>■ foam capacity (with additional flow sensor)</li> <li>■ maximum foam density</li> <li>■ expansion rate</li> <li>■ foam half life time</li> <li>■ drainage half life time</li> <li>■ sample temperature</li> <li>■ gas temperature</li> <li>■ pressure</li> </ul>	<ul style="list-style-type: none"> <li>■ mean bubble area</li> <li>■ bubble count per mm<sup>2</sup></li> <li>■ standard deviation of mean bubble area</li> <li>■ bubble size distribution</li> <li>■ bubble count half life</li> <li>■ Sauter mean radius</li> <li>■ final foam structure</li> </ul>

## 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