

A-22 NeXT

PARTICLE ANALYSER



TECHNICAL SPECIFICATIONS



EASY WORKING. GREAT RESULTS.



CONTENT

Technical data	page 3
Accessories	page 8
Application examples	page 13



TECHNICAL DATA

A-22 NeXT – Particle Analyser

Measuring Unit

	A-22 NeXT Nano	A-22 NeXT Micro
Module	Measuring Unit	Measuring Unit
Working principle	Static light scattering	Static light scattering
Field of application	Measuring of particle size, distribution of solids and suspensions, production, quality control, research and development	Measuring of particle size, distribution of solids and suspensions, production, quality control, research and development
Measuring range	0.01 - 3800 µm	0.5 - 1500 µm
Type of analysis	Wet measurement of the particle size of solids, suspensions and emulsions	Wet measurement of the particle size of solids, suspensions and emulsions
Measurement value	Particle size	Particle size
Theory	Fraunhofer, Mie	Fraunhofer, Mie
Standard	ISO 13320	ISO 13320
Optical design	Reverse Fourier design	Reverse Fourier design
Laser	Green ($\lambda = 520$ nm)	Green ($\lambda = 520$ nm)
Laser beam alignment	Automatic	Automatic
Laser class according to IEC 60825-1	Class 1	Class 1
Main detector	Specially designed semi-conductor detector (with 51 channels)	Specially designed semi-conductor detector (with 51 channels)
Large angle detectors	Yes (5 channels)	No



	A-22 NeXT Nano	A-22 NeXT Micro
Backward scattering channels	Yes (4 channels)	No
Typical measuring time	5 - 10 s (measurement value recording of an individual measurement) <hr/> 1 min (entire measurement cycle)	5 - 10 s (measurement value recording of an individual measurement) <hr/> 1 min (entire measurement cycle)
Evaluation	Particle size distribution as a cumulative distribution and density distribution displayed in a chart or in table form	Particle size distribution as a cumulative distribution and density distribution displayed in a chart or in table form
Electrical details	100 - 240 V/1~, 50 - 60 Hz, 120 Watt	100 - 240 V/1~, 50 - 60 Hz, 120 Watt
Weight	21.8 kg	19.2 kg
Dimensions (W x D x H)	670 x 350 x 320 mm	670 x 350 x 320 mm
Safety class	IP 21	IP 21
Software	NextControl software for controlling, recording and evaluating the measuring results pre-installed on supplied computer, incl. monitor, keyboard and mouse (without computer hardware for deliveries to CIS countries)	NextControl software for controlling, recording and evaluating the measuring results pre-installed on supplied computer, incl. monitor, keyboard and mouse (without computer hardware for deliveries to CIS countries)
System requirements (for computers supplied by customer)	Standard Windows PC, 4 GB RAM, at least Windows 10, USB port, monitor, keyboard, mouse	Standard Windows PC, 4 GB RAM, at least Windows 10, USB port, monitor, keyboard, mouse





Wet Dispersion Unit / Oil Dispersion Unit– A-22 NeXT Nano | A-22 NeXT Micro

Module	Wet Dispersion Unit / Oil Dispersion Unit
Type of wet dispersion	Closed liquid circulation system
Suspension volume	150 - 500 ml, adjustable in 1 % increments
Radial pump	Up to 3.5 l/min, adjustable in 1 % increments
Materials in contact with sample	High-quality stainless steel 316L, PTFE, FFKM, FEP, BK7 glass, FKM, hoses made of silicone
Conversion kit Extended for extreme chemical resistance (optional)	Seals made of FFKM, flow plate made of FFKM, hoses with inner liner made of FEP
Sample material characteristics	
Wet Dispersion Unit	Suspensions, emulsions and solids that do not agglomerate, are not soluble in the dispersion liquids, are poorly free-flowing or are sticky
Oil Dispersion Unit	Suitable for dispersion liquids with a dynamic viscosity of up to approx. 75 mPas
Sample quantity	Some 10 mg (nm range) to a few grams (mm range) depending on the sample material and particle size
Weight	16 kg
Dimensions (W x D x H)	246 x 246 x 300 mm





Ultrasonic Box – A-22 NeXT Nano | A-22 NeXT Micro

Module	Ultrasonic Box
Output	Up to 50 W, adjustable in 1 % increments
Materials in contact with sample	High-quality stainless steel 316L, FFKM, hoses made of silicone
Sample material characteristics	Suspensions, emulsions and solids that agglomerate
Weight	6.2 kg
Dimensions (W x D x H)	287 x 90 x 279 mm





Dry Dispersion Unit – A-22 NeXT Nano | A-22 NeXT Micro

Module	Dry Dispersion Unit
Type of dry dispersion	Measurement of powdery samples in an accelerated airflow, degradation of agglomerates with compressed air
Sample material characteristics	Preferably not too fine ($> 0.1 \mu\text{m}$), free-flowing materials, which react in water or other liquids
Sample quantity	Typically 1 - 300 cm ³ (depending on the sample material, particle size and goal of analysis)
Materials in contact with sample	High-quality stainless steel 316L, BK7 glass, FKM, hoses made of silicone
Sample feeding	High-frequency feeder
Dispersion	Venturi nozzle
Required compressed air supply	5 bar, 125 l/min, oil-free, water-free, particle-free
Sample exhaust	External exhaust system required
Weight	18.1 kg
Dimensions (W x D x H)	220 x 390 x 380 mm





ACCESSORIES

A-22 NeXT – Particle Analyser

Order no.

Article



Particle Analyser A-22 NeXT

Measuring units A-22 NeXT Nano | A-22 NeXT Micro

A-22 NeXT Nano

22.9040.00 Measuring unit (measuring range: 0.01 - 3,800 μm)
with USB-interface and software already pre-installed on supplied computer, incl.
monitor, keyboard, mouse for 100 - 240 V/1-, 50 - 60 Hz, 120 watts

A-22 NeXT Micro

22.9000.00 Measuring unit (measuring range: 0.5 - 1,500 μm)
with USB-interface and software already pre-installed on supplied computer, incl.
monitor, keyboard, mouse for 100 - 240 V/1-, 50 - 60 Hz, 120 watts

Modules A-22 NeXT Nano | A-22 NeXT Micro

Dispersion units and accessories

22.9300.00 Dry dispersion unit
for dispersion in an accelerated airflow with special Venturi nozzle
incl. accessory case with FRITSCH test powder, pipe cleaners, cleaning cloths and
much more

22.9200.00 Wet dispersion unit - suitable for many liquids
automatic dispersion, volume 150 - 500 ml
suitable for dispersion liquids like water, alcohol and many organic solvents
incl. accessory case with FRITSCH test powder, cleaning sand, tenside and much
more

22.9400.00 Oil dispersion unit – suitable for viscous liquids
automatic dispersion, volume 150 - 500 ml
suitable for dispersion liquids with a dynamic viscosity of up to approx. 75 mPas,
such as sunflower oil
incl. accessory case with FRITSCH test powder, cleaning sand, tenside and much
more



Order no.	Article
22.9287.00	Conversion kit extended for extreme chemical resistance for wet dispersion unit 22.9200.00 consisting of seals, flow plate and hoses
22.9288.00	Conversion kit extended for extreme chemical resistance for wet dispersion unit 22.9200.00 in combination with ultrasonic box consisting of seals, flow plate and hoses
Ultrasonic boxes for connection to the wet dispersion units	
22.9270.00	Ultrasonic box for dispersion with ultrasonic with max. 50 Watt ultrasonic output, variably adjustable for 200 - 240 V/1~, 50 - 60 Hz, 60 watts
22.9280.00	Ultrasonic box for dispersion with ultrasonic with max. 50 Watt ultrasonic output, variably adjustable for 100 - 120 V/1~, 50 - 60 Hz, 60 watts
pH measurement	
22.9500.00	pH probe for simple, continuous monitoring of the pH value of the dispersion liquid for wet dispersion unit 22.9200.00



Order no. Article

Accessories for Particle Analyser A-22 NeXT Nano | A-22 NeXT Micro

Accessories for dry measurement

Exhaust systems for measurements with the dry dispersion unit

43.9070.00	Dust category "M" according to DIN EN 60335-2-69 for 230 V/1~, 50/60 Hz, 1,600 watts
43.9060.00	With hose and ultra-fine filter, dust category "H" according to DIN EN 60335-2-69 for 230 V/1~, 50-60 Hz, 1,000 watts

Spare parts for exhaust systems for measurements with the dry dispersion

43.9055.00	Fleece filter bag (pack = 5 pieces) for exhaust system 43.9070.00 ¹⁾
43.9052.00	Plastic bag (pack = 5 pieces) for exhaust system 43.9070.00 ¹⁾
43.9065.00	Disposal bag (pack = 3 pieces) for exhaust system 43.9060.00 ¹⁾
43.9066.00	Ultra-fine filter for exhaust system 43.9060.00 ¹⁾

¹⁾ Remark: One pack/one piece is included in the scope of delivery of the exhaust system.

Compressor for measurements with the dry dispersion unit

22.2905.00	Compressor (external) incl. particle filters and water separator 230 V1~, 108 l/min oil-free for the operation of the dry dispersion unit, if no supply of compressed air is available
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Accessories for wet dispersion units

22.9515.00	Cover sample bath for wet dispersion units
22.9290.00	Pump (external) for filling the wet dispersion units with water if no suitable media connection is available
22.9170.00	Membrane laboratory pump (external) for filling the wet dispersion units with isopropanol if no media connection is available (please enquire about resistance to other aggressive liquids)
96.1010.00	User account management and audit trail for wet measurement with MaS control

**Order no.****Article****Accessory for dispersion units**

22.9125.00	Protection box for measuring cell for practical storing of the measuring cells
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Reference materials and certificates**Certified reference materials (NIST-traceable) for performance verification according to ISO 13320**

85.2230.00	Test powder for dry dispersion, 50 - 350 μm (Box with 10 single-shots 5 g)
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85.2002.00	Test set for wet dispersion Box with FRITSCH-test powder F-500 for 0.5 - 50 μm (50 g), 3 single-shots test powder 10 - 100 μm (0.5 g), 3 single-shots test suspension nano (approx. 200 nm) for system check (5 ml), 3 single-shots test suspension 1 μm for system check (5 ml), 3 single-shots test suspension 10 μm for system check (5 ml)
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85.2220.00	Test powder for wet dispersion, 10 - 100 μm (Box with 10 single-shots 0.5 g)
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85.2240.00	Test suspension nano (approx. 200 nm) for system check (Box with 10 single-shots 5 ml)
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85.2250.00	Test suspension 1 μm for system check (Box with 10 single-shots 5 ml)
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85.2260.00	Test suspension 10 μm for system check (Box with 10 single-shots 5 ml)
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FRITSCH reference materials according to ISO 13320

85.2110.00	FRITSCH-test powder F-70, 10 - 600 μm for dry dispersion (150 g)
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85.2100.00	FRITSCH-test powder F-500, 0.5 - 50 μm for wet dispersion (50 g)
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Certification

96.0070.00	Set of IQ/OQ blank forms (questionnaire format - implementation by customer - standards and implementation not included)
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Certificates for tests according to ISO 13320 on request.



Order no.

Article

Spare part dry dispersion unit

22.9355.00 Measuring cell glass cpl. 4.65 mm for dry measuring cell

Spare part wet dispersion units

22.9251.26 Measuring cell glass 4 mm incl. seal for wet measuring cell

22.9263.84 Hose set standard for wet dispersion unit 22.9200.00

22.9264.84 Hose set standard for wet dispersion unit 22.9200.00 in combination with ultrasonic box

Hoses and seals on request.

Different maintenance packages for Particle Analyser A-22 NeXT on request.



APPLICATION EXAMPLES

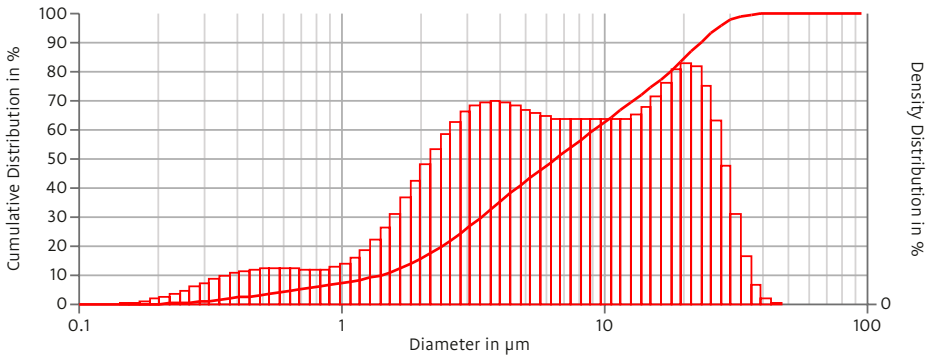
Dry or wet measurement



Sample 1: Slag cement

Measurement

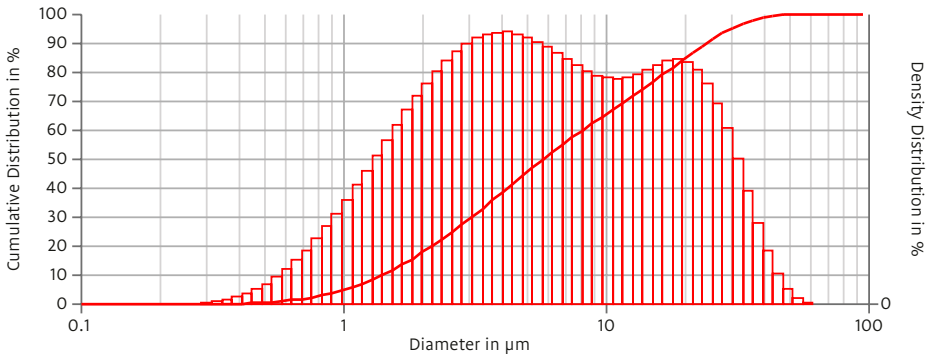
- Dry measurement



Sample 2: Chocolate

Measurement

- Wet measurement, IPA (isopropanol)

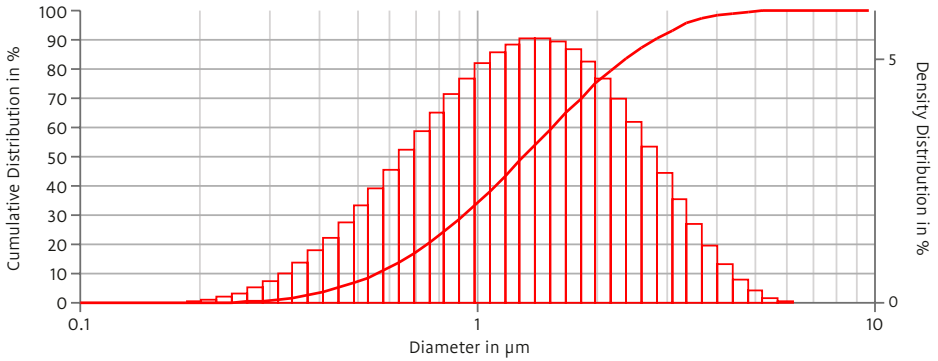




Sample 3: LFP battery

Measurement

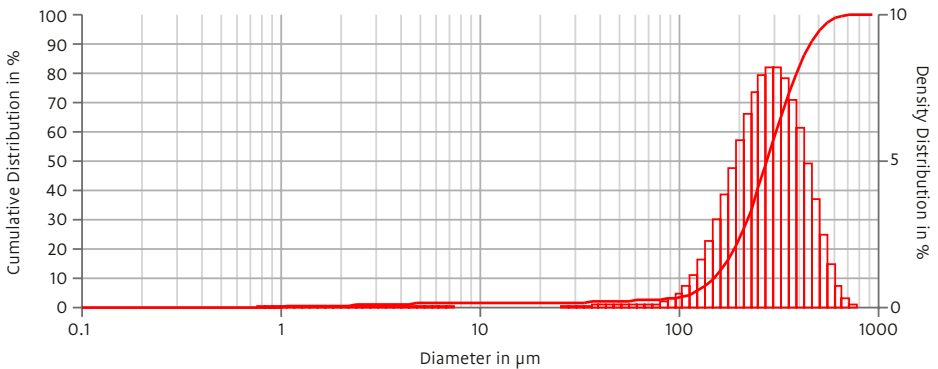
- Wet measurement, water
- Ultrasonic box



Sample 4: Sand

Measurement

- Wet measurement, water
- Ultrasonic box





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Contact person:

Contact us now

for a non-binding consultation or individual test analysis to identify your ideal device configuration and parameters.



