A-22 NeXT
PARTICLE ANALYSER

FRITSCH

AT THE TOUCH OF A BUTTON

down to the nanometre range

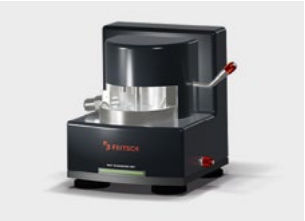
- **Extra wide measuring range** 0.01 – 3,800 µm
- **Very short measuring times** of under a minute
- **Efficient cleaning** via automatic rinsing cycles
- **Solid and low-maintenance** with few moving parts
- **Ultra-precise measurement** beyond the standard
- **Modular concept** can grow to meet your needs

Faster measurement meets maximum reliability

Featuring an extra wide measuring range of 0.01 to 3,800 µm, the FRITSCH Particle Analyser A-22 NeXT is your ideal laser solution for maximum reliability and sensitivity – no matter how small your particles. Both are equipped with a single laser and numerous patented features designed to minimize maintenance and maximize service life. Their plug-and-play approach enables quick and easy setup. Cleaning takes just a few simple steps and does not require any tools. The A-22 NeXT also includes a free software for a powerful analysis as well as for exporting and reporting of your measurement data.

Dry Dispersing Unit module

Height-adjustable funnel and self-regulating vibrating chute ensure optimum feeding for every sample material.



Wet Dispersion Unit module

Powerful centrifugal pump with variable speed for fast, uniform distribution of the sample material.

Ultrasonic Box module

Ideal if you regularly measure samples that tend to agglomerate – especially for nanometre sized particles.

Cuvette

Enables precise analysis of extremely small sample quantities of suspensions or emulsions while minimizing dispersant consumption.

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

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sizing@fritsch.de

Extreme chemical resistance module

Special conversion kit for measurement where aggressive organic solvents such as benzine or hexane are involved.

Viscous liquids module

For the dispersion of viscous suspensions, such as crude oil, with a dynamic viscosity of up to approx. 75 mPas.

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TECHNICAL SPECIFICATIONS

EASY WORKING. GREAT RESULTS.

CONTENT

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 (λ = 520 nm)	green (λ = 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
Backward scattering channels	yes (4 channels)	no

Measuring Unit

	A-22 NeXT Nano	A-22 NeXT Micro
Typical measuring time	5–10 s (measurement value recording of an individual measurement) 1 min (entire measurement cycle)	5–10 s (measurement value recording of an individual measurement) 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
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, 16 GB RAM, Windows 11 Pro, USB port, monitor, keyboard, mouse	standard Windows PC, 16 GB RAM, Windows 11 Pro, USB port, monitor, keyboard, mouse
Electrical details	100–240 V/1~, 50–60 Hz, 120 W	100–240 V/1~, 50–60 Hz, 120 W
Safety class	IP21	IP21
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

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 tend to 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 (µm 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
Safety class	IP22
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 µm), 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
Sample feeding	high-frequency feeder
Dispersion	Venturi nozzle
Required compressed air supply	at least 4 bar, 120 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

*The compressed air supply and extraction system (page 10) supplied by FRITSCH are coordinated and integral components of the defined system configuration and the underlying system specifications. Together with the measuring unit, these components form the complete measuring system and are tested and approved in this configuration prior to delivery. The use of different or modified components for the compressed air supply and/or extraction system may lead to differing results.

Cuvette – A-22 NeXT Nano | A-22 NeXT Micro

Module	Cuvette
Type of wet dispersion	open smallest-volume liquid system
Dispersion volume	7–8.5 ml
Measuring range *(depending on the sample material)*	0.5–250 µm (micro) 0.01–250 µm (nano)
Stirring system	magnetic stirrer
Materials in contact with sample	high-quality stainless steel 316L, FFKM, BK7 glass
Sample material characteristics	emulsions and suspensions
Sample quantity	a few milligrams/millilitre, depending on the sample material and particle size
Net weight	2.1 kg
Dimensions (W x D x H)	63 x 302 x 228 mm

ACCESSORIES

A-22 NeXT – Particle Analyser

Order no.	Article
	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 W
	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 W
	Modules A-22 NeXT Nano | A-22 NeXT Micro
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
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
22.9280.00	Ultrasonic Box for dispersion with ultrasonic with max. 50 W ultrasonic output, variably adjustable, for 100–120 V/1~, 50–60 Hz, 60 W
22.9270.00	Ultrasonic Box for dispersion with ultrasonic with max. 50 W ultrasonic output, variably adjustable, for 200–240 V/1~, 50–60 Hz, 60 W

Order no.	Article
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
22.9700.00	Cuvette homogeneous mixing of the sample due to software-controlled magnetic stirrer system with very high chemical resistance suitable for few milligrams/millilitres sample quantity in suspensions or emulsions with minimal use of dispersion liquid 7–8.5 ml, measuring range 0.01–250 µm Nano | 0.5–250 µm Micro incl. accessory case with cleaning rods, pipette tips, replacement magnetic stirrer, and much more
22.9500.00	pH probe for simple, continuous monitoring of the pH value of the dispersion liquid for Wet Dispersion Unit 22.9200.00
	Accessories for Dispersion Units
22.9178.00	Table-top stand with cover for measuring cells, for convenient storage of the measuring cells
	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 W
43.9080.00	with hose and ultra-fine filter, dust category “H 14” according to DIN EN 60335-2-69 for 230 V/1~, 50-60 Hz, 1,600 W
	Spare parts for exhaust systems for measurements with the Dry Dispersion Unit
43.9055.00	fleece filter bag (pack = 5 pieces) for exhaust system 43.9070.00
43.9052.00	plastic bag (pack = 5 pieces) for exhaust system 43.9070.00 and 43.9080.00
43.9051.00	polyester filter set (pack = 2 pieces) for exhaust system 43.0970.00
43.9081.00	ultra-fine filter for exhaust system 43.9080.00

Order no.	Article
	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
	Accessories for Wet Dispersion Units
22.9515.00	cover sample bath for Wet Dispersion Units
22.9180.00	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)
22.9165.00	Control box for Dispersion Units for controlling the desired Dispersion Unit, for example when two Wet Dispersion Units are operated with a single Measuring Unit
	Other accessories
	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)
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)
85.2220.00	test powder for wet dispersion, 10–100 µm (box with 10 single-shots 0.5 g)
85.2240.00	test suspension nano (approx. 200 nm) for system check (box with 10 single-shots 5 ml)
85.2250.00	test suspension 1 µm for system check (box with 10 single-shots 5 ml)
85.2260.00	test suspension 10 µm for system check (box with 10 single-shots 5 ml)

Order no.	Article
	FRITSCH reference materials according to ISO 13320
85.2100.00	FRITSCH test powder F-500, 0.5–50 µm for wet dispersion (50 g)
85.2110.00	FRITSCH test powder F-70, 10–600 µm for dry dispersion (150 g)
	Certification
96.0070.00	set of IQ/OQ blank forms (questionnaire format – implementation by customer – standards and implementation not included)
	Certificates for tests according to ISO 13320 on request.
	Spare parts
	Spare part Dry Dispersion Unit
22.9355.00	measuring cell glass cpl. 4.65 mm for dry measuring cell
	Spare parts cuvette
22.9751.00	measuring cell glass and seal set, consisting of 2 measuring cell glasses and FFKM seals for the cuvette measuring cell
22.9701.00	cuvette 7 ml, incl. 2 measuring cell glasses, FFKM seals and a cuvette protection box
	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.*

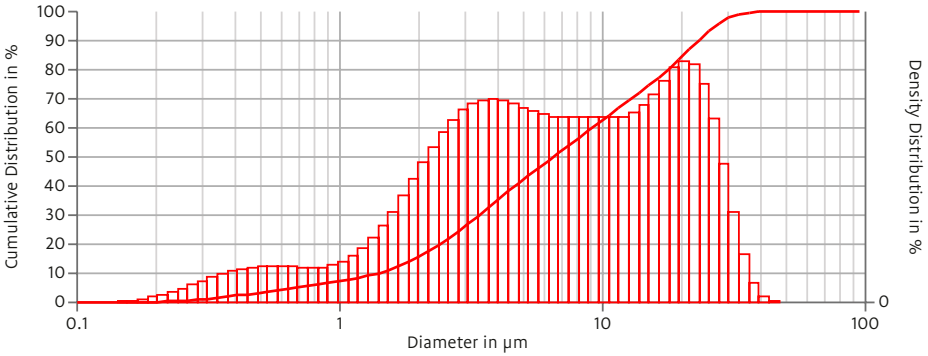
APPLICATION EXAMPLES

A-22 NeXT – Particle Analyser

Sample 1: slag cement

Measurement

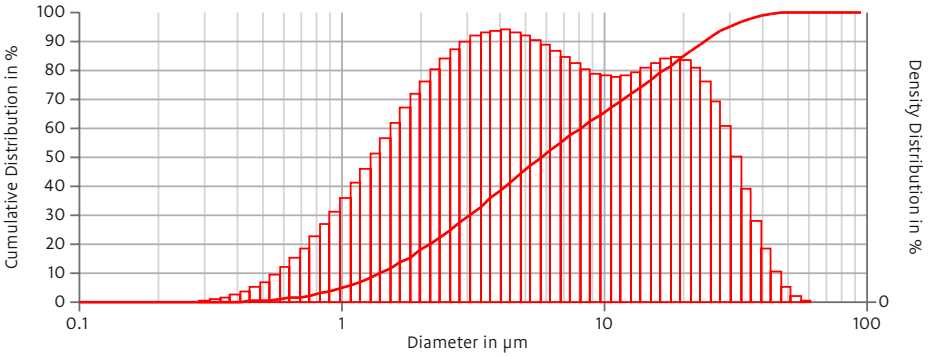
- dry measurement



Sample 2: chocolate

Measurement

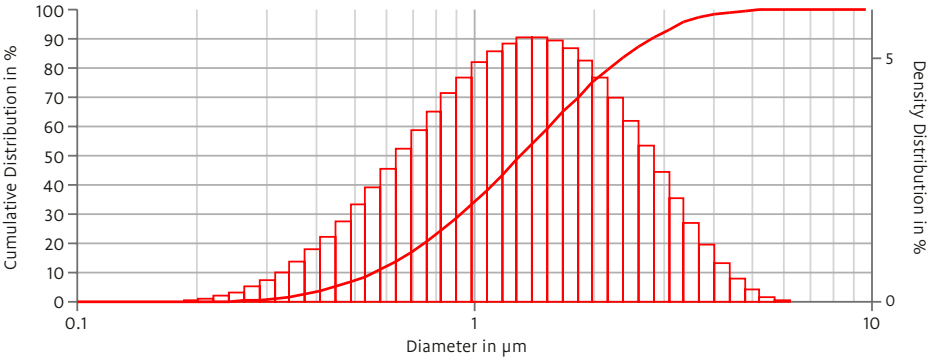
- wet measurement, IPA (isopropanol)



Sample 3: LFP battery

Measurement

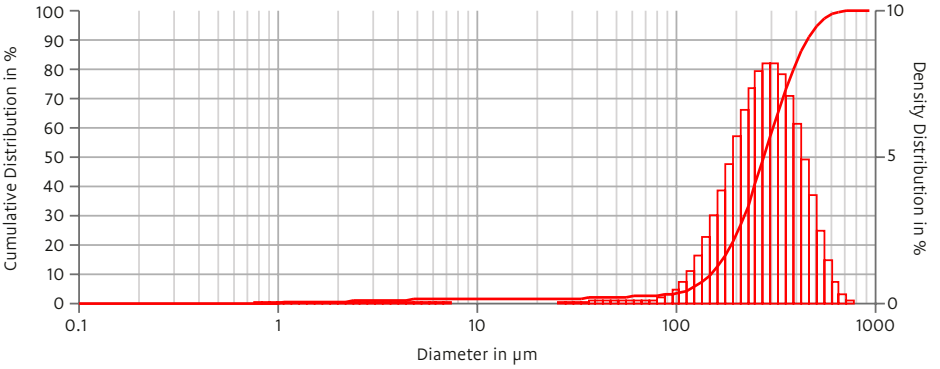
- wet measurement, water
- Ultrasonic Box



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.

Version number: V01_2026 | Subject to technical changes.

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