

NanoGenizer - Titanium, High Pressure Homogenizer

Nanoemulsion | Cell Disruption | Nanodispersion | Deagglomeration | Liposome

Unique Benefits

- **Strong:** Flow rate ~100mL/min at 30,000 psi
- **Energy efficient:** 1/2 energy loss of the most homogenizers
- **Small:** Integrated design delivers the light weight and small dimensions
- **Smart:** Controlled inlet volume ± 0.1 mL; Auto stop setup (time, stroke volume & passes)
- **Silent:** Noiseless performance
- **CE compliant and RoHs compliant**

Discount for publication of public papers



The NanoGenizer-Titanium is an updated version of NanoGenizer series. It utilizes a titanium high pressure cylinder, which offers high corrosion resistance and mechanical stability than 316 stainless steel. It's designed for laboratory R&D and small-scale production. Simply powered by a single-phase electrical outlet. No need for compressed air or hydraulic oil. Maximum working pressure up to 3,062 bar (45,000 psi). It utilizes microfluidication **Diamond Interaction Chamber** technology, and can be widely used in the pharmaceutical, biochemical, cosmetics, food and dairy industries among others. It can also support experimentations from particle size reduction to cell disruption, nano emulsions, nano dispersions, liposome and more.

Specifications

Catalog No.	NG-15K	NG-20K	NG-25K	NG-30K	NG-45K
Flow rate	120mL/min	120mL/min	100mL/min	100mL/min	60mL/min
Min. Sample	5mL	5mL	5mL	5mL	5mL
Max. Pressure	15,000psi	20,000psi	25,000psi	30,000psi	45,000psi
Dimensions (cm)	70×36×30	70×36×30	70×36×30	70×36×30	70×36×30
Weight	35 kg (77 lbs)	35 kg (77 lbs)	35 kg (77 lbs)	35 kg (77 lbs)	35 kg (77 lbs)
Max. Temp.			80°C (176°F)		
Power			110V/220V		
Cleaning			Flush to clean		
Features			Digital display of pressure or pressure gauge		



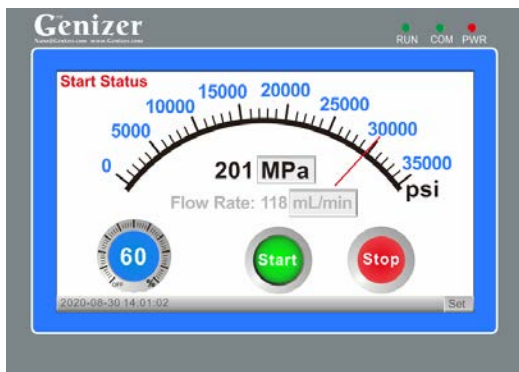
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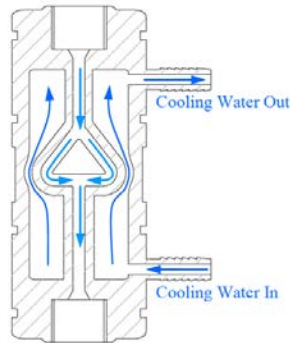
Standard NanoGenizer



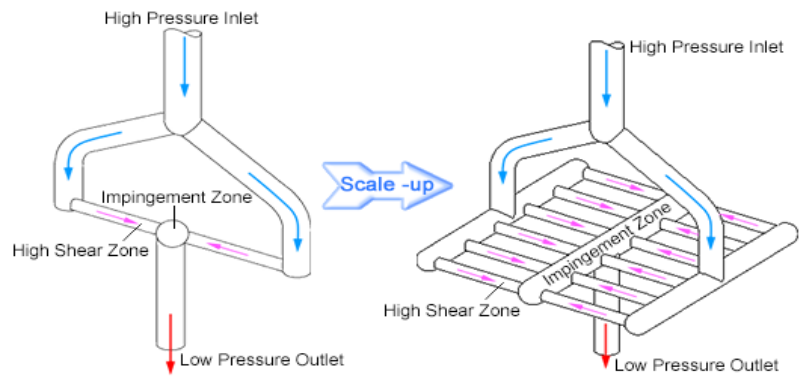
Control Screen

Standard Features

Parts	Y-type Diamond interaction chamber with cooling option
Control System	High pressure programming control systems [®] : Touch Screen, Speed control, Auto stop control by time, pressure or temperature, settable volume control as low as 5mL
Pressure Gauge	Digital display on the touch screen
Inlet Type	1/4" HP coupling
Outlet Type	1/4" HP coupling
Feed Reservoir	20mL Syringe
Collector Reservoir	20mL Syringe
Product Material	316L stainless steel, Tungsten Carbide, Viton, Teflon, UHMWPE
Material Standard	Pharmaceutical Grade, FDA & GMP approvable
Warranty	1 year against any manufacturing defects



Diamond Interaction Chambers with Cooling Option



Single-Slotted Y-Type VS Multi-Slotted Y-Type

Diamond Interaction Chamber, Microfluidic Technology

Unique Benefits

- Core Part of NanoGenizer Series
- Electro polishing and inner Passivation for pharmaceutical application
- Y-Type & Z-Type
- Material: 316L S/S and Diamond



Diamond Interaction Chamber (DIXC) is used to produce uniform nano-particles in high pressure homogenizers. The fixed geometry within the Y-Type and Z-Type DIXC is to create a uniform processing profile and all materials will be processed with equal disruptive forces. Single slotted Interaction Chambers have a single micro-channel and are ideal choices for small batches research, while the multi-slotted interaction chamber comprises multiple micro-channels in parallel, which can be used at industrial scales, by increasing the flow rate through the DIXC but with equal processing forces.

Astaxanthin-Loaded Liposomes

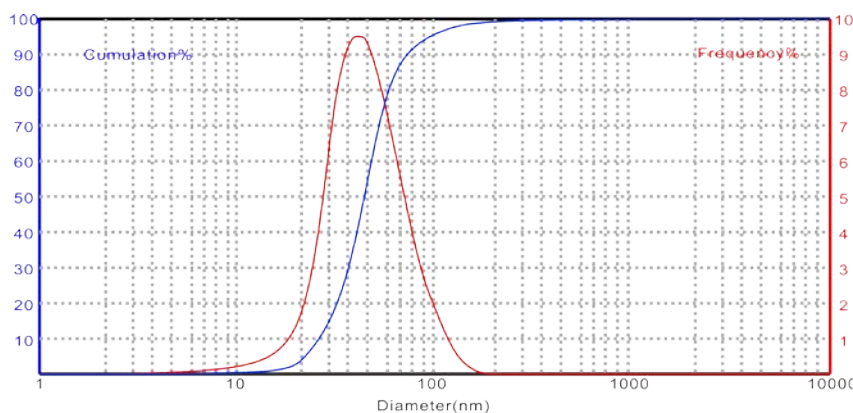
Polyglycerol Ester-Based Nanoemulsions

Lemon Essential Oils-Loaded Liposomes

Silicone Oils Encapsulated in Liposomes

Blend Essential Oils Encapsulated in Liposomes

Tretinol-Loaded Nanoemulsion



Z-Average 59nm

Options for NanoGenizer High Pressure Homogenizer



Inlet Reservoir: Jacketed Glass Cylinder



NanoGenizer combines with Online Liposome Extruder

Available Option

Parts	Online Liposome Extruder, Y-Type & Z-Type DIXCs, Heat Exchanger
Enclosure	Stainless Steel
High Pressure Cylinder	Stainless Steel
Control System	Mechanical control; Speed, start, stop control
Detector	Pressure gauge, Pressure and Temp. transducer up to 8 optional
Inlet	Tri-Clamp or Luer
Outlet	Tri-Clamp or Luer
Heat Exchanger	HPE-100-3D, HPE-150-3D; HPE-200-3D;
Liposome Extruder	GOE-200mL; GOE-1000mL
Feed Reservoir & Collector Reservoir	10mL, 20mL, 50mL, 100mL, 200mL, 500mL Syringe, Cylinder, Tank, Jacketed Glass Feed Reservoir or Online
Cylinder	Titanium High pressure Cylinder (Resistant to strong acid and base)



Diamond Interaction Chamber



Plunger - Ceramic