

Homogenizers

HOMOGENIZERS Hand Held, BenchTop, 160Watt, 0.1-250ml

The Homogenizer is widely used in fields of Biotechnology, Human & veterinary medicine/clinical medicine, Pharmaceutical industry, Cosmetics industry, Food industry, Petrochemistry, Paint & lacquer industry etc. The material is repeatedly cycled through narrow slits in the stator where it is rapidly sheared and disintegrated by high shear mechanical action. Complete homogenization of tissues (muscle, liver, breast tissue, etc.) is usually achieved in a few seconds. Little, if any, heat is produced during the process.



HOG-160-1/2

Features:

- Easy to hold & light weight for one hand operation.
- Sample Volume Range: 0.1-50 ml or 1-250ml
- Autoclavable stainless steel shafts. Inert to aggressive solutions.
- All shafts are interchangeable shafts and are easily removed for cleanup.
- High speed motor. Speed control from 8,000 to 30,000rpm.

HOG-160-1/2, Handheld Homogenizer

Use for mixing, emulsification, shredding, or chopping.

Practical answer for small samples.

D-160 is a rotor/stator type hand held tissue homogenizer which can rapidly homogenize, disperse and emulsify samples in 0.1-250ml. During operation, the suspended material is drawn into the core of the homogenizer by a rotor turning at up to 30,000 rpm.



Model	HOG-160-1/2
Power Supply	110-120V/60Hz , 220-240V / 50-60 Hz
Motor Type	Universal motor, 160 Watt
Speed range (rpm)	8,000 - 30,000
Max. Circum. Speed	6.3-14m/sec
Speed control type	Dial knob 6 stage
Working Volume (ml, H ₂ O)	0.1-50ml(Dispersing shaft DS-160/5) 1-250ml(Dispersing shaft DS-160/10)
Max. Viscosity	5000mPas
Material of Dispersing Shaft	SS 316L stainless steel / PTFE
Dimension LxWxH (mm)	46 x 55 x 230
Weight (kg)	0.6
Noise	72 dB(A)
Operating Environment	0-40°C, 85% rel. humidity
Protection class	IP20

Homogenizers of HOG-160-1/2

Model	Package Include	Power supply
HOG-160-1 (Package 1)	HOG-160 drive, H 370 Stand, DS-160/5 shaft, Dispersing shaft 5mm, for solid/liquid media volumes from 0.1-50ml	110-120V, 50/60Hz
		220-240V, 50/60Hz
HOG-160-2 (Package 2)	HOG-160 drive, H370 Stand, DS-160/10 shaft Dispersing shaft 10mm, for solid/liquid media volumes from 1- 250ml	110-120V, 50/60Hz
		220-240V, 50/60Hz

Model	Description of Dispersing Shaft	Applications / Industry Examples	Treatable Volume (ml)	Max. Circum. Speed (m/sec)	Dia. of the Rotor (mm)	Min/Max Emersion Depth (mm)	Ultimate Fineness (µm)	
							Suspension	Emulsion
DS-160/5	5mm for Solid/liquid media	Biotechnology, Pharmaceutical industry 0.1ml - 50ml	0.1-50	6.3	5	7/50	10-50	1-10
DS-160/10	10mm for Solid/liquid media	Biotechnology, Pharmaceutical industry 1ml - 250ml	1-250	14	10	10/120	10-50	1-10

* All kind of sterilization possible

HandHeld, BenchTop, 250Watt, 0.3–3000ml **HOMOGENIZERS**



HOG-020, HOG-020D, HOG-022, BenchTop Homogenizers

Applications:

- Widely used in dispersing various materials.
- Also applied to biology & medical research for skin tissue, cells and so on.
- Fiber, paper, cloth, cosmetic, dye & ink can be applied.
- Water and oil mixing and emulsifying.

Features:

- Digital speed meter display (HOG-022).
 - Spring elevator for easy positioning the pole (HOG-022).
 - With an overheat protection and fuse safety device (HOG-022).
 - Various containers can be used.
 - Operating capacity: 0.3m1–3L with the same driver but different homogenizer head choices.
- *Any homogenizer head need be purchased separately.
(Photo shown here is for reference only).



- The impeller can be separated completely and cleaned easily.



Model	HOG-020	HOG-020D	HOG-022
Digital	NO	YES	YES
Motor	DC 250W		
Speed (rpm)	26,000		20,000
Size (mm)	W200xD315xH500		W310xD270xH690
Weight (kg)	7		10
Power	AC110/220V, 50/60Hz		

	Model	Capacity (H ₂ O)	Dimension	Application
	GEN-0010	0.3~10 ml	Ø7x130 mm	To homogenized and mix cell tissue in small amount
	GEN-0250	2~250 ml	Ø12x170 mm	To disperse plant and animal tissue, To dispose suspensions and emulsions for homogenizing, mixing & extraction
	GEN-2000	2~2000 ml	Ø20x200 mm	To disperse plant and animal tissue, To dispose suspensions and emulsions for homogenizing, mixing & extraction
	GEN-3000	100~3000 ml	Ø30x250 mm	To disperse organic and inorganic matters for homogenizing, mixing and extraction

HOMOGENIZERS BenchTop, 500Watt, 10ml-8Liter

HOG-500, Homogenizer

Philosophy made simple, so easy to handle. Ability to achieve quality results fast. It has the speed and power to emulsify, suspend, cut-up and disrupt to yield accurate results every time. Full flexibility as hand-held, post or wall



mounted, with H-stand or plate-stand support. Top speed of high 10,000-30,000rpm, reduces processing time significantly. Big safety switch for unexpected emergency stop. Smooth motor drive makes working very safe and comfortable. Additional feature of automatic overload protection increases the life span of the motor. Smooth start also prevents unnecessary spills.

Process of dispersing:

The material is sucked in to the head axially, then accelerated using the rotor's high rpm rate, circumferential or peripheral velocity. The centrifugal acceleration between the outer rotor wall and the inner stator wall propels the material through the stator shearing slits.

Quick-change-system:

MRC tools consists of only a few parts. One shaft, one axle, one Teflon bearing and one rotor stator. No special tools are needed to disassemble. Only requirement is a simple piece of cloth.

Optional Dispersing shaft: SS5CSR5. Model: DS-500/5

- Volume 1-50 ml • Max. Circum. Speed 5,8m/sec
- Applications: Dispersing shaft 5mm for solid/liquid media diagnostics of tissue decomposition, clinical & medical suspensions. Suitable for centrifuge products and Eppendorf tubes, centrifugal glasses etc. Dia. 5mm.



Model	HOG-500
Motor type	Universal motor, 500 Watt
Voltage / Frequency	110-120V/60Hz , 220-240V / 50-60 Hz
Speed range (rpm)	10,000 - 30,000
Max. Circum. Speed	22.7-36m/sec
Speed control type	Dial knob 7 stage
Working Volume (ml, H₂O)	10-40000ml (Optional)
Max. Viscosity	10,000mPas
Noise emission(drive only)	< 79 dB(A) at 30,000 rpm
Material of Dispersing Shaft	SS 316L stainless steel / PTFE
Dimension LxWxH (mm)	70 x 70 x 255
Weight (kg)	1.3
Operating Environment	0-40°C, 85% rel. humidity
Protection class	IP20

Features:

- Viscosity up to 10,000 mPas
- Continuously adjustable speeds for better results
- Light-weighted and small-dimensioned for better handling
- Triple safety of the drive, overload protection & Smooth start - against jerky work, safety switch
- 316L steel High quality dispersing tools as standard for better resistance to corrosion
- Quick-change system of the dispersing tools for a short changing time between preparations.

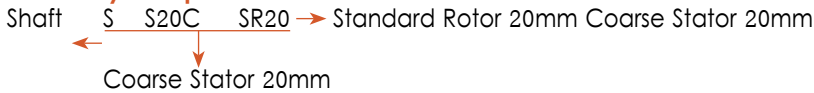
Homogenizers of HOG-500-1/2

Model	Package Include	Power supply
HOG-500-1 (Package 1)	HOG-500 drive, with dispersing shaft 1 for solid/liquid media & H-600 stand, 10-5000ml of water	110-120V, 50/60Hz 220-240V, 50/60Hz
HOG-500-2 (Package 2)	HOG-500 drive, with dispersing shaft 2 for W/O or O/W emulsions & H-600 stand, 10-5000ml of water	110-120V, 50/60Hz 220-240V, 50/60Hz

Model	Description of Dispersing Shaft	Applications / Industry Examples	Treatable Volume (ml)	Max. Circum. Speed (m/sec)	Dia. of the Rotor (mm)	Min/Max Emersion Depth (mm)	Ultimate Fineness (µm)	
							Suspension	Emulsion
DS-500/1	Solid/liquid media	Coarse crushing of hard solids in liquid / Pharma, Petro Industry, Ceramic industry	10-5000	23.5	20	40/175	10-50	1-10
DS-500/2	W/O or O/W emulsions	Emulsions, intensive mixing of w/o & o/w emulsions. Dispersing of resins & pigments for paint & lacquer industry / Sewage/Pollution Control, Paint Industry, Paper & Tissue Industry, Pharmaceutical industry	10-5000	23.5	20	40/175	10-50	1-10

* All kind of sterilization possible

Summary of Options:



- Material used for shaft is high grade fine 316L stainless steel and PTFE for seal
- Dispersing shaft consists of shaft tube, axle, PTFE seal, a rotor and a stator.

Components of Dispersing shaft



Stators:



18900118
S20C Stator
20 coarse (C)



18900119
S20F Stator
20 fine (F)



18900120
S30C Stator
30 coarse (C)



18900121
S30F Stator
30 fine (F)



18900122
S40C Stator
40 coarse (C)

Rotors:



18900123
SR20 Rotor
Standard 20



18900124
SR30 Rotor
Standard 30



18900125
CR20 Rotor
Cutter rotor 20



18900126
CR30 Rotor
Cutter rotor 30



18900127
MR20 Rotor
Mixing rotor 20



18900128
MR30 Rotor
Mixing rotor 30



18900129
ER20 Rotor
Emulsifying rotor 20



18900130
ER30 Rotor
Emulsifying rotor 30

Model	Description of Shaft	Applications / Industry Examples	Treatable Volume (ml) (H ₂ O)	Max. Circum. Speed (m/sec)	Dia. of the Rotor (mm)	Min/Max Immersion Depth (mm)	Ultimate Fineness (µm)	
							Suspension	Emulsion
18900118/18900125	Dispersing tool with knives for brous/stringy materials	Fragmentation of vegetable, animal and human tissues / Sewage/Pollution Control, Pharma, Food, Paper & Tissue, Tobacco Industry	10-5000	23.5	20	40/175	10-50	1-10
18900118/18900127	Solid/liquid media	Suspensions, intensive mixing / Ceramic Industry, Paint Industry	10-5000	23.5	20	40/175	10-50	1-10
18900119/18900125	Dispersing tool with knives for brous/stringy materials	Fragmentation of vegetable, animal and human tissues / Sewage/Pollution Control, Bio Technology, Pharma, Food, Paper & Tissue, Tobacco Industry	10-5000	23.5	20	40/175	10-150	1-10
18900119/18900127	Solid/liquid media	Emulsions, intensive mixing of w/o & o/w emulsions / Ceramic, Cosmetic, Paint, Food, Paper & Tissue, Petro Chemistry Industry	10-5000	23.5	20	40/175	10-150	1-10
18900120/18900124	Solid/liquid media	Coarse crushing of hard solids in liquid / Sewage/Pollution Control, Pharma, Food, Paper & Tissue, Petro Chemistry Industry	100-8000	36.1	30	40/175	5-25	1-5
18900120/18900126	Dispersing tool with knives for brous/stringy materials	Fragmentation of vegetable, animal and human tissues / Sewage/Pollution Control, Pharma, Food, Paper & Tissue, Pharma Industry	100-8000	36.1	30	40/175	5-25	1-5
18900120/18900128	Solid/liquid media	Suspensions, intensive mixing / Ceramic Industry, Paint Industry	100-8000	36.1	30	40/175	5-25	1-5
18900121/18900124	Solid/liquid media	Dispersing of resins and pigments for paint and lacquer industry / Sewage/Pollution Control, Paint Industry, Paper & Tissue, Pharma Industry	100-8000	36.1	30	40/175	5-25	1-5
18900121/18900130	W/O or O/W emulsions	Emulsions, intensive mixing of w/o and o/w emulsions. Dispersing of resins and pigments for paint & lacquer industry / Sewage/Pollution Control, Paint Industry, Paper & Tissue, Pharma Industry	100-8000	36.1	30	40/175	5-25	1-5
18900121/18900128	Solid/liquid media	Emulsions, intensive mixing of w/o and o/w emulsions / Sewage/Pollution Control, Cosmetic, Pharma, Tobacco Industry	100-8000	36.1	30	40/175	5-25	1-5
18900120/18900127	Stirring Shaft	High speed mixing without crushing / Ceramic, Food, Sewage/Pollution Control Industry	250-20000	36.1	30	40/175	High-Speed Mixer	
18900122/18900128	Stirring Shaft	High speed mixing without crushing / Ceramic, Food, Sewage/Pollution Control Industry	1000-40000	36.1	30	40/175	High-Speed Mixer	

* All kind of sterilization possible

HOMOGENIZERS BenchTop, 250Watt



HOG-022

HOG-022, BenchTop Homogenizers

Applications:

- Widely use in homogenizing, blending, dispersing, emulsifying, suspending and combining various materials
- Biology and medicine research included skin tissue, cell disruption, isolated nuclei, vaccines, enzymes and so on.
- Processing of natural/artificial fibers and dyes
- Fine breaking and crushing of cellulose, hard tissue, paper, cloth, and so on
- Fine breaking and blending the rubber, resin, natural/artificial materials
- Mixing and emulsifying lubricants
- Mixing and emulsifying other oil products
- Mixing and emulsifying water and oil
- Adhesives, coatings, inks, cosmetics.

Features:

- Digital speed display
- Spring-lift pole for easy operation
- Over-heat and fuse protection devices
- No special containers, as long as the dispersing element can be placed in.
- With same one driver Different dispersing elements for purchasing separately to deal with different capacities from 0.3ml - 3L
- A mechanical crushing effect from the composition of the fixed cutter and inner cutter of the Dispersing element.

Model	HOG-022
Digital	YES
Motor	DC 250W
Speed (rpm)	500 ~ 20,000
Body Size (mm)	W146xL283xH250
Overall Size (mm)	W313xL303xH540
Weight (kg)	10
Power	AC110/220V, 50/60Hz

	Model	Capacity (H ₂ O)	Dimension	Application
	GEN-0010	0.3~10 ml	Ø7x130 mm	To homogenized and mix cell tissue in small amount
	GEN-0250	2~250 ml	Ø12x170 mm	To disperse plant and animal tissue, To dispose suspensions and emulsions for homogenizing, mixing & extraction
	GEN-2000	2~2000 ml	Ø20x200 mm	To disperse plant and animal tissue, To dispose suspensions and emulsions for homogenizing, mixing & extraction
	GEN-3000	100~3000 ml	Ø30x250 mm	To disperse organic and inorganic matters for homogenizing, mixing and extraction

HOG-08/09/011, Homogenizers Spin-Mix

Homogenizer can be widely used in mixing and dispersing, emulsifying for Medicine, foods, Cosmetics, Industrial products.



HOG-08

HOG-09

HOG-011

Features:

There are many uses for homogenizer as following different fields:

- Chemical: Dyestuff, pigment, additive .. etc.
- Medical: Biochemistry, virus, bacteria, yeast .. etc.
- Pharmacy: Medicine test, vaccines, syrup .. etc.
- Food: Trial, study check.
- Others: Magnetized chemical tape analysis, silicone .. etc.

Optional Tank Sets:COTR-100
30~100mlCOTR-200
60~200mlCOTR-500
100~500mlCOTR-1000
500~1000ml

Model	HOG-08	HOG-09	HOG-011
Motor	100W	250W	150W High Frequency Motor
Max. Rotational Speed	18,000rpm	15,000rpm	18,000rpm
Capacity	30~1,000ml	30~1,000ml	30~1,000ml
Timer	15 min or Continuous running	15 min or Continuous running	1~60min or Continuous running
Dimensions(mm)	W250×D250×H396	W250×D250×H396	W250×D250×H413
Weight	6kg	8kg	8kg
Control System	Thyristor Control System	Thyristor Control System	Inverter Control System
Power Source	AC100V 50/60Hz 3A	AC100V 50/60Hz 6A	AC100V 50/60Hz 5A



HOG-24

Typical Samples:

- Human, animal, plant cells
- Micro-organisms
- Soil and sediments
- Swabs and feces
- Drugs, polymers, lotions, etc.

Sample Preparations:

- As heat generated by grinding process will make part of sample tissue damaged, we recommend:
- After putting the sample into the sample tube, please preserve the sample for 6-12 hours at low temperature (below -60°C degree)
 - Then take out for grinding to make the effects achieve the best.

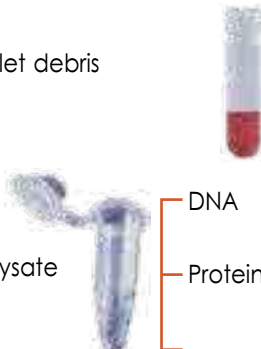
Overview of the HOG-24 Procedure:

- Prepare lysis tube



- Process about 30 seconds

- Centrifuge to pellet debris about 1 minute



- Transfer cleared lysate

HOG-24, Homogenizer

Fast, effective and reproducible homogenization of a wide range of samples, including hard to lyse tissues and cells. It also holds extraordinary powerful processing of even impact resistant samples such as bones or cartilage. The HOG-24 is an ideal solution for releasing DNA, RNA, Proteins, Enzymes, etc. from very tough samples while still retaining molecular integrity.

Features:

- "3D Rotating High Speed Motion" for quick disruption of those fibrous tissues and resistant cells
- 50 programmable memory settings and user optional condition settings
- A wide range of rotation speed settings from 4.0 m/s to 7.0 m/s, increment 0.05 m/s
- Brushless motor realizing no brush particle generation and no brush replacement
- Easy to remove sample tube holder and easy to fix sample tubes
- Easy to monitor the disruption process through the clear lid
- Simultaneously homogenize either 24x2.0ml/1.5ml/0.5ml or 12x5ml tubes
- Disposable tubes ensure no threat of cross-contamination
- Most samples can be processed in 35 sec. or less.



Model	HOG-24
Speed Range	4.0m/s - 7.0m/s (in steps of 0.05m/s)
Cycle Duration	1~90s (in steps of 1s)
Pause Time	0~2 minutes
Acceleration	≤2 sec. to max. speed
Deceleration	≤2 sec. to stop
Programmable	50 Saved Programs
Number of Cycles	10
Display	O-LED, High light and no visual angle limit
Number of Samples	1~24 samples
Running Noise	< 68db
Weight	25kg
Dimensions (WxDxH)	280mm x 360mm x 385mm

Code	Description
301-13010-00	HOG-24 AC 1 00-240V 50/60Hz
301-13011-01	Rotor for 24x2.0ml
301-13011-02	Rotor for 12x5.0ml
301-13011-11	Grind tube with 1.4mm Silica beads
301-13011-12	Grind tube with 2.8mm Silica beads
301-13011-13	Grind tube with 3mm Metal beads
301-13011-14	Grind tube with 0.7mm Garnet beads
301-13011-15	Grind tube with 0.15mm Carbide beads
301-13011-16	Grind tube with 0.25mm Carbide beads
301-13011-17	Grind tube with 0.1 mm Glass beads
301-13011-18	Grind tube with 0.5mm Glass beads