

NEW

# D-500

## High Shear Homogenizer

The high shear homogenizer D500 is applicable to various tasks from sample preparation to formulation study. The motor drives the rotor to rotate at high speed, and the sample is homogenized or dispersed by the gap between the rotor and stator, usually in a short period of time.

## Features

- High quality 316L stainless steel with corrosion and autoclave resistance
- Rotor with simple design can be dismantled, cleaned, and sterilized conveniently
- 6 speed levels
- Applicable for sample with viscosity up to 10000mPa·s
- Replaceable rotors and stators sharing the same shaft, cost-effective
- Automatic overload protection mechanism maximizes the working life of motor.
- Smooth motor start, stable acceleration without spillage risk



## Applications

Widely applied for histocyte lysis, cell homogenization, emulsion, nanometer scale dispersion process in biology, pharmaceutical, genetic and pathology study, dairy product or fruit homogenization, polymerization reaction, production of fragrance, cosmetics, textile auxiliary, food, ink, paints, asphalt, fine chemicals, agricultural chemicals, and analysis in mineral exploration, environmental protection and energy resource exploration.

- Routine homogenization, emulsion, depolymerization, dispersion application
- Disperse substance to form suspension and emulsion
- Disperse pigment and resin
- Disperse animal or human tissue into various solution
- Facilitate the dissolve of solid substances
- Sample preparation for quality control test
- Animal or plant cell lysis
- Emulsion, cream cosmetics, and food formulation study
- Extraction of active pharmaceutical ingredient from pills and tablets

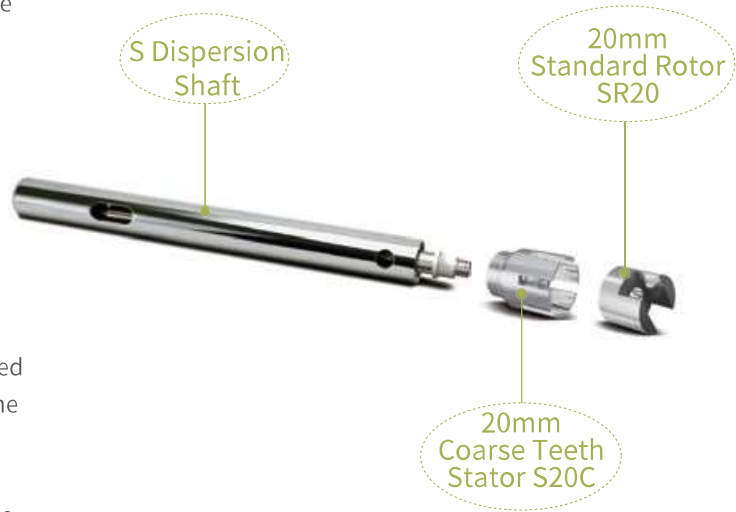
Specifications	D-500
Speed range	10000-30000rpm
Max linear velocity	22.7-36m/sec
Speed Level	6 stage
Working volume	10-40000mL
Max. viscosity	10000mPa·s
Material of dispersing shaft	SS 316L stainless steel, PTFE
Noise Level	79dB(A)
Protection class	IP20
Voltage, frequency	110-120V/60Hz, 220-240V/50-60Hz
Power	500W
Motor type	AC carbon brush motor
Dimension [WxDxH]	75x75x280mm
Weight	1.7kg
Permissible ambient temperature and humidity	0-40°C, 85%RH

# Dispersion Head Selection Guide

**Material:** All dispersion head components are made of high quality 316L stainless steel to ensure the mechanical performance while rotating at high speed of 30000rpm.

**Bearing:** Made of excellent material, the bearing is sturdy, durable and corrosion resistance. Its mechanical performance and chemical characteristics are stable.

**Easy to clean:** The dispersion head is designed to be easily dismantled and thus cleaned. The components can be cleaned manually or automatically, and can be autoclaved. Even the precision components can be removed to clean.




**DS-500/1** Cat No.18201331

Solid and liquid dispersion  
Volume 10-5000mL  
Max. circum. Speed 23.5m/sec  
General purpose  
Emulsion granularity range 1-10 $\mu$ m  
Suspension granularity range 10-50 $\mu$ m


**DS-500/2** Cat No.18201332

Emulsion  
Volume 10-5000mL  
Max. circum. Speed 23.5m/sec  
General emulsion purpose  
Emulsion granularity range 1-10 $\mu$ m  
Suspension granularity range 10-50 $\mu$ m


**DS-500/5** Cat No.18900117

Small amounts of solid and liquid dispersion  
Volume 1-50mL  
Max. circum. Speed 6.3m/sec  
Compatible with 5mm stator and 3.8mm rotor  
Special design for 1-50mL tissue  
homogenization, mixing and suspension in  
Eppendorf tube, tube strip and centrifuge  
tubes for clinical and diagnostic application

Stator & Rotor		Purpose	Working Volume	Max. circum. Speed	Rotor Dia.	Stator Dia.	Min./Max.	Granularity ( $\mu$ m)		Application
Combinations								mL	m/s	
18201331	SS20CSR20	Solid-liquid mix	10-5000	23.5	15	20	40/170	10-50	1-10	P,CI,PC,SD
18900205 18900215	S20C CR20	Fiber	10-5000	23.5	15	20	40/170	10-50	1-10	SP,M,F,PT,TI
18900205 18900216	S20C MR20	Solid-liquid mix	10-5000	23.5	15	20	40/170	10-50	1-10	CI,PI
18201332	SS20FER20	Emulsion	10-5000	23.5	15	20	40/170	10-50	1-10	SP,PI,PT,P
18900206 18900215	S20F CR20	Fiber	10-5000	23.5	15	20	40/170	10-50	1-10	SP,BT,M,F,PT,TI
18900206 18900216	S20F MR20	Solid-liquid mix	10-5000	23.5	15	20	40/170	10-50	1-10	CI,C,PI,F,PT,PC
18900213 18900216	S30C MR20	As stirring paddle	250-20000	36.1	15	30	40/170	High speed mixing		CI,F,SP
18900213 18900208	S30C SR30	Solid-liquid mix	100-8000	36.1	23	30	40/170	5-25	1-5	SP,M,F,PT,P
18900213 18900209	S30C CR30	Fiber	100-8000	36.1	23	30	40/170	5-25	1-5	SP,M,F,PT,P
18900213 18900229	S30C MR30	Solid-liquid mix	100-8000	36.1	23	30	40/170	5-25	1-5	CI,PI
18900228 18900208	S30F SR30	Solid-liquid mix	100-8000	36.1	23	30	40/170	5-25	1-5	SP,PI,PT,P
18900228 18900212	S30F ER30	Emulsion	100-8000	36.1	23	30	40/170	5-25	1-5	SP,PI,PT,P
18900228 18900229	S30F MR30	Solid-liquid mix	100-8000	36.1	23	30	40/170	5-25	1-5	CI,C,P,F,DT,TI
18900214 18900229	S40C MR30	As stirring paddle	1000-40000	36.1	23	40	40/170	High speed mixing		CI,F,SP
18900117	SS5CSR5	Small amount solid-liquid mix	1-50	6.3	4	5	40/60	10-50	1-10	BT,M

**Note:**

BT: Biotech; F: Food; P: Pharmaceuticals; C: Cosmetics; M: Medicine Analysis; PC: Petroleum Chemistry; PT: Paper and Pulp Industry; SP: Sewage Treatment; CI: Ceramic Industry; CH: Chemical Industry; PI: Paints Industry; TI: Tobacco Industry

The common combinations of rotor and stator are listed in the table above. Dispersion head can be mounted on the homogenizer main body and fixed on the holder with fixtures. All the components of dispersion head can be sterilized with all usual methods (including chemicals, autoclave, etc.)