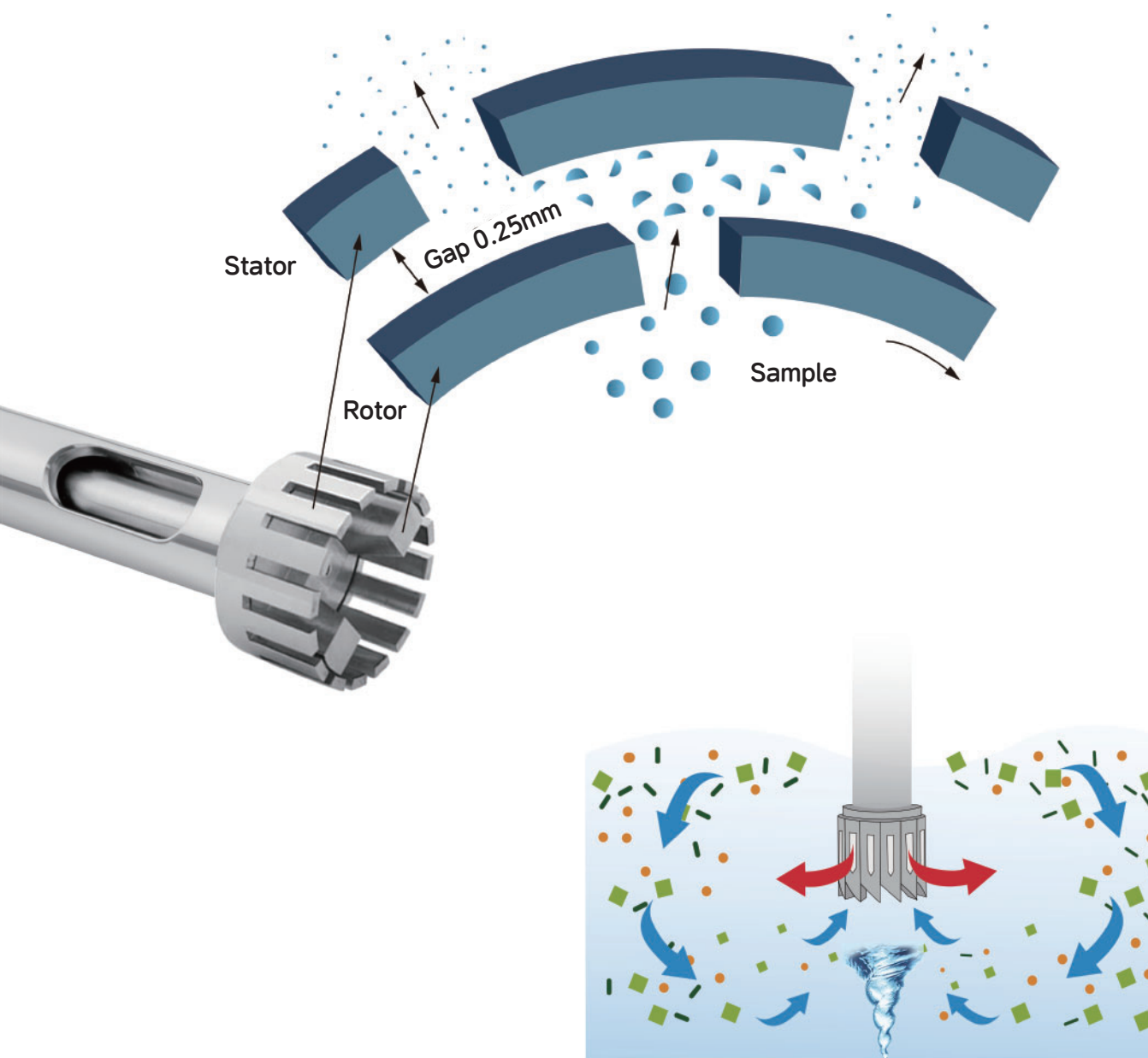


Dispersion Tools | Principle of fixed rotor

The dispersion tools achieves an efficient dispersion effect through the principle of stator and rotor. Under high-speed rotation, the dispersion tools forms a vortex, forcing the material into the movement area of the dispersion tools. With the help of centrifugal force, the material is radially thrown into the narrow and precise gap between the stator and rotor. Through the strong squeezing and fine shearing of the stator and rotor, the material particle size is reduced from coarse to the micrometer level or even smaller.

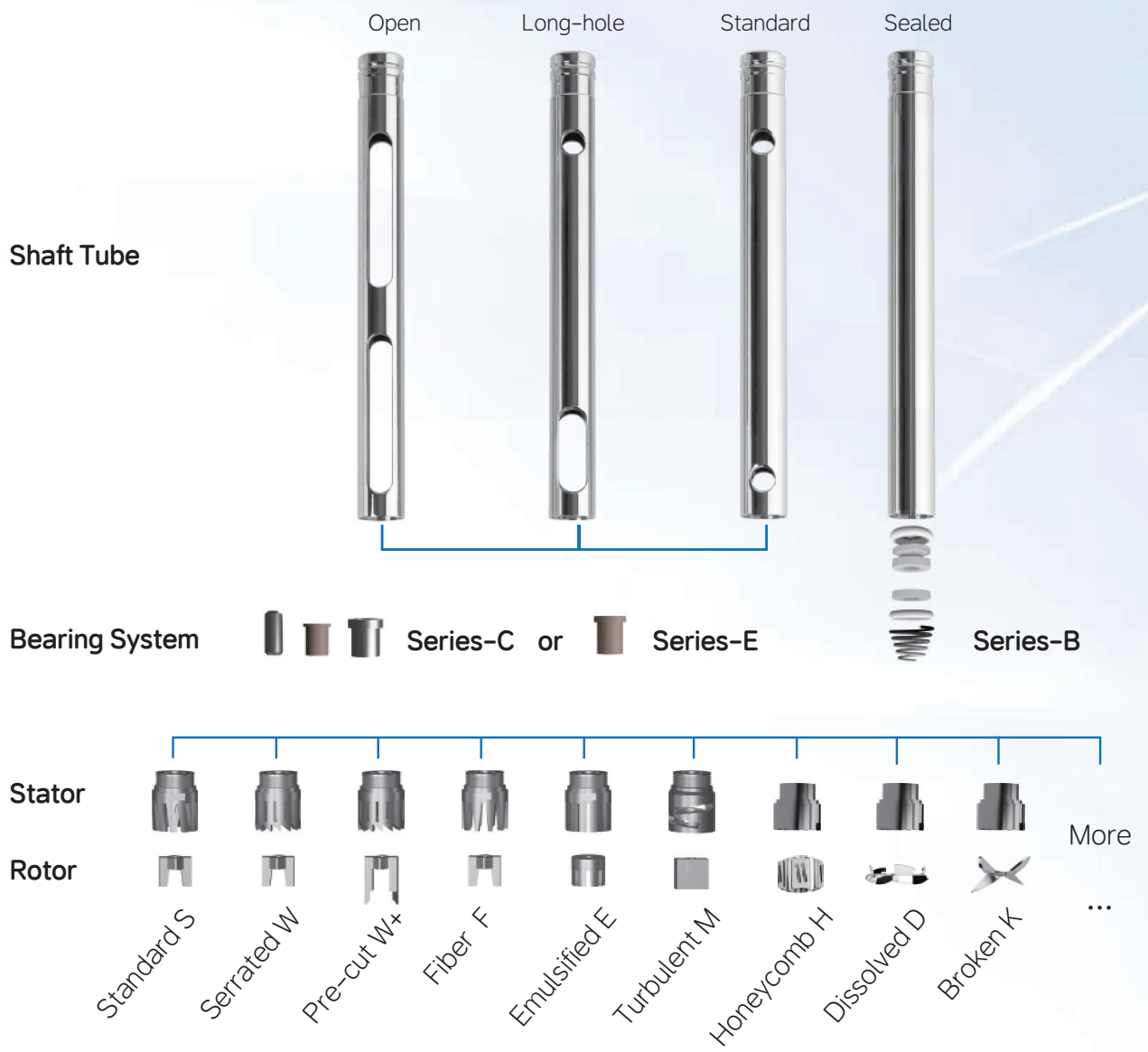
The material changes its flow direction under the resistance of itself and the container wall, forming a high-speed liquid circulation. This process ensures that each part of the material is thoroughly stirred and dispersed. Different geometric shapes of stators and rotors achieve homogenization, dispersion, emulsification, suspension and mixing of different materials. This dispersion technology has been extended from the laboratory to small-scale, medium-scale workshops and formal production.



Dispersion Tools | 100 Types

The dispersion tool is a core component in sample processing. DISRAD adheres to ultra-high precision manufacturing standards and features a modular design. With a single dispersion axis, the system enables flexible configuration of various tools, thereby reducing operational costs. To meet diverse sample processing requirements, DISRAD provides up to 100 types of dispersion tools, allowing users to select from different tool types and diameters. These include Standard Type, Serrated Type, Fiber Type, Emulsifying Type, Turbulent Type, Pre-cutting Type, and Dissolving Type, with diameters ranging from $\varnothing$ 5mm to $\varnothing$ 65mm, capable of processing sample volumes from 0.5ml to 50L.

Whether it is laboratory testing, research and development, small-scale trials, medium-scale trials and other application scenarios, corresponding processing solutions can be matched. In fields such as biology (cells, animal and plant tissues), pharmaceuticals, cosmetics, food, medicine, and chemical engineering, operations such as sample dispersion, homogenization, emulsification, suspension, and mixing can be quickly achieved, greatly improving experimental efficiency.



The Series-T dispersion tools are specially designed for trace or small samples. Six diameters are available (Ø5, Ø7, Ø10, Ø12, Ø14, Ø18mm), and are suitable for homogenization and dispersion processing in small containers such as 1.5/2ml EP tubes, 5/15/50/250ml centrifuge tubes or test tubes. It is mainly applicable to fields such as molecular biology, animal and plant histology, medicine, food, and biopharmaceuticals.

Series-T (Ø5~18mm)

Suitable for trace or small amounts of samples



Simple Structure

- Cost Performance Economy, stable and reliable, widely used
- The quick-plug interface makes it convenient and fast to install the dispersion tools

High-precision Craftsmanship

- Stringent manufacturing processes, featuring outstanding performance, highly consistent tolerances and reliable quality
- Made of sanitary-grade stainless steel 316L and treated with electrolytic passivation, it is endowed with excellent corrosion resistance
- The inner and outer surfaces have been subjected to physical and electrolytic composite polishing, resulting in high surface finish, easy cleaning and no residue of materials

Diversity

- Multiple types of dispersion tools are available (standard/sawtooth/fiber/turbulent type) to meet the processing requirements of different samples
- Multiple diameter dispersion tools are available (Ø5~18mm), with processing capacities ranging from 0.5ml to 1.8L

Special bushing

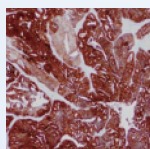
- Special Polyflon™ PTFE bushings, featuring excellent wear resistance and chemical stability

Disinfection and sterilization

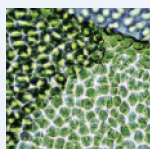
- It can withstand chemical sterilization, moist heat sterilization and dry heat sterilization

Dispersion Tools | Series-T

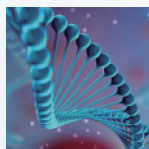
Model	T5S	T5W	T7S	T7W	T10S	T10W	T12S	T12W
Order No.	130511	130521	130711	130721	131011	131021	131211	131221
Tools	Standard	Serrated	Standard	Serrated	Standard	Serrated	Standard	Serrated
Volume Range (H ₂ O)ml	0.5-10	0.5-5	0.5-50	0.5-50	1-100	1-100	1.5-200	1.5-200
Stator Diameter mm	Ø 5	Ø 5	Ø 7.8	Ø 7.8	Ø 10	Ø 10	Ø 12	Ø 12
Stator And Rotor Clearance mm	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Particle Size of Suspension mm	5-25	5-25	5-25	5-25	5-25	5-25	5-35	5-35
Emulsion Particle Size mm	1-10	1-10	1-10	1-10	1-10	1-10	1-10	1-10
Maximum Rotational Speed rpm	25000	25000	25000	25000	25000	25000	25000	25000
Maximum Linear Velocity m/s	5.4	5.4	8.7	8.7	11.8	11.8	12.5	12.5
Immersion Depth ≥mm	20	20	20	20	19	19	21	21
Effective Length mm	80	80	110	110	120	120	120	120
Limit Temperature	180°C	180°C	180°C	180°C	180°C	180°C	180°C	180°C
PH Range	2-13	2-13	2-13	2-13	2-13	2-13	2-13	2-13



Animal Tissues



Plant Tissues



Biological cytology



Pharmaceuticals



Food

Dispersion Tools | Series-T

Model	T14S	T14W	T14F	T14M	T18S	T18W	T18F	T18M
Order No.	131411	131421	131431	131441	131811	131821	131831	131841
Tools	Standard	Serrated	Fiber	Turbulent	Standard	Serrated	Fiber	Turbulent
Volume Range (H ₂ O)ml	5-500	5-500	5-500	5-600	10-1500	10-1500	10-1500	10-1800
Stator Diameter mm	Ø14	Ø14	Ø14	Ø14	Ø18	Ø18	Ø18	Ø18
Stator And Rotor Clearance mm	0.25	0.25	0.25	0.25	0.25	0.25	0.25	0.25
Particle Size of Suspension mm	10-50	10-50	15-60	20-80	10-50	10-50	15-60	20-80
Emulsion Particle Size mm	1-10	1-10	5-20	10-30	1-10	1-10	5-20	10-30
Maximum Rotational Speed rpm	25000	25000	25000	25000	25000	25000	25000	25000
Maximum Linear Velocity m/s	12.5	12.5	12.5	12.5	17.5	17.8	17.8	17.8
Immersion Depth ≥mm	24	24	24	24	25	25	25	25
Effective Length mm	160	160	160	160	160	160	160	160
Limit Temperature	180°C	180°C	180°C	180°C	180°C	180°C	180°C	180°C
PH Range	2-13	2-13	2-13	2-13	2-13	2-13	2-13	2-13

