

Selection Guide
IKA Dispersers

Proven and precise dispersion technology
for your application



Model	T 10 basic ULTRA-TURRAX®	T 18 mini digital ULTRA-TURRAX®	T 25 mini control ULTRA-TURRAX®	T 18 digital ULTRA-TURRAX®	T 18 brushless digital ULTRA-TURRAX®	T 25 digital ULTRA-TURRAX®	T 25 easy clean digital ULTRA-TURRAX®	T 25 easy clean control ULTRA-TURRAX®	T 50 digital ULTRA-TURRAX®	T 65 digital ULTRA-TURRAX®
Motor type	Carbon brush	Brushless DC	Brushless DC	Carbon brush	Brushless DC	Carbon brush	Brushless DC	Brushless DC	Brushed motor	brushless AC
Motor rating input/output	125 W / 75 W	210 W / 160 W	210 W / 160 W	500 W / 300 W	400 W / 300 W	800 W / 500 W	500 W / 400 W	500 W / 400 W	1100 W / 700 W	2600 W / 2200 W
Speed range	8000 – 30,000 rpm	3000 – 25,000 rpm	600 – 25,000 rpm	3000 – 25,000 rpm	3000 – 25,000 rpm	3000 – 25,000 rpm	3000 – 25,000 rpm	3000 – 25,000 rpm	600 – 10,000 rpm	1000 – 9500 rpm
Max. circumferential speed	11.9 m/s	16.6 m/s	16.6 m/s	16.6 m/s	16.6 m/s	30.1 m/s	30.1 m/s	30.1 m/s	28.8 m/s	28.8 m/s
Theoretical volume range (H ₂ O)	0.5 ml – 100 ml	1 ml – 1.5 L	1 ml – 1.5 L	1 ml – 1.5 L	1 ml – 1.5 L	1 ml – 2 L	1 ml – 2 L	1 ml – 2 L	250 ml – 30 L	2 – 50 L
Recommended volume range	100 ml and under	100 ml – 500 ml	100 ml – 500 ml	200 ml – 1.5 L	200 ml – 1.5 L	200 ml – 2 L	200 ml – 2 L	200 ml – 2 L	2 L – 30 L	10 L – 50 L
Recommended maximum viscosity	5000 mPas	2000 mPas	2000 mPas	5000 mPas	5000 mPas	5000 mPas	5000 mPas	5000 mPas	5000 mPas	5000 mPas
Operation type	Handheld or Benchtop	Benchtop	Benchtop	Benchtop	Benchtop	Benchtop	Benchtop	Benchtop	Benchtop	Floor standing
Timer function	–	✓	✓	–	✓	–	✓	✓	–	–
Recommended vessels	Microcentrifuge tubes, Falcon tubes	Conical flasks, beakers	Conical flasks, beakers	Conical flasks, beakers	Conical flasks, beakers	Conical flasks, beakers, closed reactor systems	Conical flasks, beakers, closed reactor systems	Conical flasks, beakers, closed reactor systems	Beakers, stainless steel mixing vessels	Floor mixing vessels (stainless steel)
Automation ready	–	✓	✓	–	✓	–	✓	✓	–	–
Temperature sensing	–	–	✓	–	–	–	–	✓	–	–
Interface	–	USB-C	USB-C, WPAN, Wifi, Ethernet	–	Micro-USB	–	Micro-USB	Micro-USB	–	–
Dimensions (W × D × H)	56 × 66 × 178 mm	66 × 100 × 186 mm	66 × 100 × 186 mm	87 × 106 × 271 mm	89 × 161 × 270 mm	87 × 106 × 271 mm	89 × 161 × 270 mm	89 × 161 × 270 mm	115 × 139 × 355 mm	300 × 400 × 420 mm

Selection Guide
Dispersing tool

How to choose the right dispersing tool

Shaft Nomenclature

Compatible Dispersing Motor:

- > **S 10:** T 10 basic / battery
- > **S 18:** T 18 mini / digital / brushless
- > **S 25:** T 25 digital / mini
- > **S 25 EC:** T 25 easy clean
- > **S 50:** T 50 digital

Shaft Working Conditions/Sealing Systems:

- > **N or C:** dispersing in open containers under ambient conditions
- > **KV or KG – HH:** dispersing under positive pressure and vacuum conditions as low as 2 mbar
- > **KD:** dispersing under no positive pressure and for vacuum conditions up to 100 mbar

Diameter and Working Volume:

- > **Number:** stator diameter, determines the mixing volume

Ultimate sample fineness achievable:

- > **G / M / F:** coarse / medium / fine ultimate sample particle size

Special Tool Design:

- > **ST:** sawtooth design for sample precutting in solution (e.g. fibrous samples)
- > **KS:** plastic dispersing tools

Shaft Selection Criteria

Volume	<p>Shafts with larger stator diameters can support bigger volumes. Always check the technical datasheet of each tool to know the working volume range that each size can process.</p> <p>Vessel opening sizes should also be verified to ensure the dispersing tool fits inside the mixing vessel.</p>	 
Final particle size	<p>The teeth gap determines the final particle size that can be achieved.</p> <p>G: coarse tool (general purpose) M: medium tool F: fine tooth</p>	 
Sample property / hardness	<p>Hard samples like plastic resins are best processed with blunt-edged rotor-stator systems. These are general purpose use dispersers that can also be used for making emulsions and dissolving powders.</p> <p>Fibrous samples like meat, leaves and paper can be processed more effectively using sawtooth, jagged edged rotor-stator systems.</p>	 
Open or closed system operation	<p>Dispersing tools come with different sealing systems to support either open or closed system applications.</p> <p>N/C: for open batch applications e.g. in beakers KD: for closed system applications under vacuum (min: 100 mbar) KV/KG-HH: for closed system applications under vacuum and/or positive pressure (min: 2 mbar)</p>	 
Temperature sensitive samples	<p>Specialised dispersing tools come with a patented integrated temperature sensor to measure the actual medium temperature in real time and safety temperatures can be set to protect heat-sensitive samples from degradation or overheating.</p> <p>Choose the EC-T-C dispersing tools with the appropriate motor.</p>	
Materials in contact with medium	<p>For standard applications in the food, cosmetic, chemical and pharmaceutical industries, stainless steel and plastic materials are compatible with most samples.</p> <p>In biological and life science laboratories, plastic may be the material of choice if stainless steel is incompatible with certain samples or to avoid cross-contamination.</p>	 
Autoclave compatible	<p>All N/C dispersing tools are made of materials that can withstand autoclaving conditions.</p> <p>For all other tools, care needs to be taken as some bearings are unable to withstand autoclaving conditions.</p>	 