Proven and precise technology for 60 years

ULTRA-TURRAX® - the epitome of first-rate dispersing devices enable the best possible results whether used for homogenization, emulsification or suspensions. The IKA® range of dispersers are used for volumes ranging from 0.5 to 50,000 ml (H₂O) and come equipped with a digital display. These dispersers offer a wide speed range up to 30,000 rpm that enables users to work at high circumferential speeds even with small rotor diameters. The high-performance drive ensures immense speed stability. Due to their broad spectrum of dispersing tools, IKA® dispersers are highly effective for a variety of uses.

The unique and patented ULTRA-TURRAX® Tube Drive system is the world’s first disperser system with disposable and sealed sample tubes. Multiple tube styles are available for mixing, homogenizing and grinding for a variety of applications.

The magic LAB® is a unique and multi-functional small-scale laboratory machine. It is designed for mixing, dispersing, wet milling and for the incorporation of powders into liquids. The magic LAB® is most frequently used for the development of new products or for optimizing existing process techniques. It is an ideal machine for continuous, circulating and batch processing with interchangeable modules.

Protection class according to DIN EN 60529: IP 42

3 Year warranty*

*3+1 years after registering at www.ika.com/register; glassware and wearing parts excluded
T-series range of dispersers are designed for mixing and dispersing of products with a wide range of viscosities. This series of dispersers enables the best possible results for any application with improved product quality and better stability.

T-series | Innovative solutions for dispersion technology

Digital display for precise monitoring of set and actual speeds.

Wide selection of dispersing tools to suit your application.

Motor protection against overload.

Quick-connect coupling to exchange dispersing tools easily.

2+1 year after registering at www.ika.com/register

2+1 Year warranty*

To get customized and additional accessories, please visit www.ika.com/service

Special features | Accessories

Plate stands
R 1625 560 mm
R 1626 800 mm
R 1627 1000 mm
With slip resistant foil.

R 182 Boss head clamp
Ident. No. 0000593400

Dispersing element S 25 N – 18 G
Ident. No. 000063730

Trial devices
You may request demo units in order to experience our high-quality disperser offerings first hand.

Motor protection against overload.

Wide selection of dispersing tools to suit your application.

Rotating knob for adjusting the speed.

Digital display for precise monitoring of set and actual speeds.

2+1 year after registering at www.ika.com/register

2+1 Year warranty*

To get customized and additional accessories, please visit www.ika.com/service

Ident. No. 0003160000 R 1825 560 mm
Ident. No. 0003160100 R 1826 800 mm
Ident. No. 0003160200 R 1827 1000 mm

Wide selection of dispersing tools to suit your application.

Digital display for precise monitoring of set and actual speeds.

Protection
## Technical data | T-series ULTRA-TURRAX® Dispersers

### T 10 basic
- Motor rating input / output: 125 / 75 W
- Volume range (H₂O): 1 – 1500 ml
- Viscosity max.: 5000 mPas
- Speed range: 600 – 25,000 rpm
- Speed display: LED
- Speed control: stepless
- Noise without element: 65 dB(A)
- Extension arm diameter: 8 mm
- Extension arm length: 130 mm
- Process type: batch
- Dimensions (W x D x H): 56 x 66 x 178 mm
- Weight: 0.5 kg
- Perm. ambient temperature: 5 – 40 °C
- Permissible relative moisture: 80 %
- Protect. class DIN EN 60529: IP 30
- Interface: no
- Voltage: 230 V
- Frequency: 50/60 Hz
- Ident. No.: 0003737000

### T 18 digital
- Motor rating input / output: 500 / 300 W
- Volume range (H₂O): 1 – 3000 ml
- Viscosity max.: 5000 mPas
- Speed range: 3000 – 10,000 rpm
- Speed display: LED
- Speed control: stepless
- Noise without element: 75 dB(A)
- Extension arm diameter: 13 mm
- Extension arm length: 160 mm
- Process type: batch
- Dimensions (W x D x H): 87 x 106 x 211 mm
- Weight: 2.5 kg
- Perm. ambient temperature: 5 – 40 °C
- Permissible relative moisture: 80 %
- Protect. class DIN EN 60529: IP 20
- Interface: no
- Voltage: 200 – 240 V
- Frequency: 50/60 Hz
- Ident. No.: 0003720000

### T 25 digital
- Motor rating input / output: 800 / 500 W
- Volume range (H₂O): 1 – 2000 ml
- Viscosity max.: 5000 mPas
- Speed range: 3000 – 25,000 rpm
- Speed display: LED
- Speed control: stepless
- Noise without element: 75 dB(A)
- Extension arm diameter: 13 mm
- Extension arm length: 160 mm
- Process type: batch
- Dimensions (W x D x H): 87 x 106 x 211 mm
- Weight: 2.5 kg
- Perm. ambient temperature: 5 – 40 °C
- Permissible relative moisture: 80 %
- Protect. class DIN EN 60529: IP 20
- Interface: no
- Voltage: 200 – 240 V
- Frequency: 50/60 Hz
- Ident. No.: 0003725000

### T 50 digital
- Motor rating input / output: 1100 / 700 W
- Volume range (H₂O): 0.25 – 30 l
- Viscosity max.: 5000 mPas
- Speed range: 600 – 10,000 rpm
- Speed display: LED
- Speed control: stepless
- Noise without element: 72 dB(A)
- Extension arm diameter: 13 mm
- Extension arm length: 220 mm
- Process type: batch
- Dimensions (W x D x H): 115 x 139 x 355 mm
- Weight: 5.76 kg
- Perm. ambient temperature: 5 – 40 °C
- Permissible relative moisture: 80 %
- Protect. class DIN EN 60529: IP 20
- Interface: no
- Voltage: 200 – 240 V
- Frequency: 50/60 Hz
- Ident. No.: 0003787000

### T 65 basic
- Motor rating input / output: 1800 / 1500 W
- Volume range (H₂O): 2 – 50 l
- Viscosity max.: 5000 mPas
- Speed range: 2000 – 9500 rpm
- Speed display: LED
- Speed control: stepless
- Noise without element: 75 dB(A)
- Extension arm diameter: 13 mm
- Extension arm length: 220 mm
- Process type: batch
- Dimensions (W x D x H): 185 x 400 x 450 mm
- Weight: 26 kg
- Perm. ambient temperature: 5 – 40 °C
- Permissible relative moisture: 80 %
- Protect. class DIN EN 60529: IP 20
- Interface: no
- Voltage: 200 – 240 V
- Frequency: 50 Hz
- Ident. No.: 0004023500

### T 65 digital
- Motor rating input / output: 2600 / 2200 W
- Volume range (H₂O): 2 – 50 l
- Viscosity max.: 5000 mPas
- Speed range: 2000 – 9500 rpm
- Speed display: LED
- Speed control: stepless
- Noise without element: 75 dB(A)
- Extension arm diameter: 13 mm
- Extension arm length: 220 mm
- Process type: batch
- Dimensions (W x D x H): 300 x 400 x 390 mm
- Weight: 29 kg
- Perm. ambient temperature: 5 – 40 °C
- Permissible relative moisture: 80 %
- Protect. class DIN EN 60529: IP 20
- Interface: no
- Voltage: 3 x 400 V
- Frequency: 50/60 Hz
- Ident. No.: 0004234500

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Dispersing tools are not included in delivery.

Technical data:
- Motor rating input / output:
- Volume range (H₂O):
- Viscosity max.:
- Speed range:
- Speed display:
- Speed control:
- Noise without element:
- Extension arm diameter:
- Extension arm length:
- Process type:
- Dimensions (W x D x H):
- Weight:
- Perm. ambient temperature:
- Permissible relative moisture:
- Protect. class DIN EN 60529:
- Interface:
- Voltage:
- Frequency:
- Ident. No.
IKA® Original | Dispersing tools

A wide variety of rotor-stator configurations and seals are required to process different mediums. In order to make the device adaptable to the user’s specific needs, it is sometimes necessary to use two dispersing tools to achieve from coarse to fine particle size reduction. The quick-connect coupling facilitates the exchange of dispersing tools.

IKA®+ Special accessories!

> Bronze bearings to serve in a variety of applications
> FDA-variant KV shafts are only available through special order

For dispersing instrument

<table>
<thead>
<tr>
<th>For dispersing instrument</th>
<th>Dispersing element</th>
<th>Shaft / Agitator shaft</th>
<th>With seal or bearing type**</th>
<th>Generator or element***</th>
<th>With slider diameter (mm)</th>
<th>Degree of fineness achieved***</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 10 basic</td>
<td>S 10</td>
<td>N</td>
<td>–</td>
<td>–</td>
<td>5 / 8 / 10</td>
<td>G</td>
</tr>
<tr>
<td>T 10 digital</td>
<td>S 10</td>
<td>N</td>
<td>–</td>
<td>10 / 19</td>
<td>G</td>
<td>G</td>
</tr>
<tr>
<td>T 25 digital</td>
<td>S 25</td>
<td>N / KV / NK</td>
<td>–</td>
<td>8 / 10 / 19 / 25</td>
<td>G / F</td>
<td>G / F</td>
</tr>
<tr>
<td>T 50 digital</td>
<td>S / F 50</td>
<td>N</td>
<td>–</td>
<td>45 / 65 / 80</td>
<td>G / M / F</td>
<td>G / M / F</td>
</tr>
<tr>
<td>T 65 basic</td>
<td>S 65</td>
<td>KG – HH</td>
<td>G</td>
<td>65</td>
<td>G</td>
<td>G</td>
</tr>
<tr>
<td>T 65 digital</td>
<td>S 65</td>
<td>KG – HH</td>
<td>G</td>
<td>65</td>
<td>G</td>
<td>G</td>
</tr>
</tbody>
</table>

**N = PTFE bearing
KV = Ball bearing with vacuum-tight sliding-ring seal with silicon carbide seal rings
NK = PTFE bearing with additional ball bearing without seal
KG – HH = Ball bearing with sliding-ring seals of hard metal allow with FFPM seals rings

**G = Proved configuration
W = Special element
**G = Coarse
M = Medium
F = Fine

IKA® dispersing technology works by using the rotor-stator principle. The system consists of a rotor within a stationary stator. Due to the high circumferential speed, the medium to be processed is drawn axially into the dispersion head and then forced radially through the slots in the rotor-stator arrangement. The high speed and minimal gap between the rotor and stator produces extremely strong shear forces which results in better dispersion.

Find the right dispersing tool to suit your application

<table>
<thead>
<tr>
<th>Volume Range (L)</th>
<th>10 ml</th>
<th>50 ml</th>
<th>100 ml</th>
<th>500 ml</th>
<th>1 L</th>
<th>2 L</th>
<th>10 l</th>
<th>20 l</th>
<th>50 l</th>
</tr>
</thead>
<tbody>
<tr>
<td>Vacuum operation</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
<td>No</td>
</tr>
<tr>
<td>Circumferential speed (m/s)</td>
<td>6.0</td>
<td>25</td>
<td>6.0</td>
<td>25</td>
<td>6.0</td>
<td>25</td>
<td>6.0</td>
<td>25</td>
<td>6.0</td>
</tr>
<tr>
<td>Ultimate fineness, suspensions (µm)</td>
<td>5 – 10</td>
<td>5 – 10</td>
<td>5 – 10</td>
<td>5 – 10</td>
<td>5 – 10</td>
<td>5 – 10</td>
<td>5 – 10</td>
<td>5 – 10</td>
<td>5 – 10</td>
</tr>
<tr>
<td>Ultimate fineness, emulsions (µm)</td>
<td>1 – 10</td>
<td>1 – 10</td>
<td>1 – 10</td>
<td>1 – 10</td>
<td>1 – 10</td>
<td>1 – 10</td>
<td>1 – 10</td>
<td>1 – 10</td>
<td>1 – 10</td>
</tr>
</tbody>
</table>

For dispersing instrument

<table>
<thead>
<tr>
<th>For dispersing instrument</th>
<th>Dispensng element</th>
<th>Shaft / Agitator shaft</th>
<th>With seal or bearing type*</th>
<th>Generator or element**</th>
<th>With slider diameter (mm)</th>
<th>Degree of fineness achieved***</th>
</tr>
</thead>
<tbody>
<tr>
<td>T 10 basic</td>
<td>S 10</td>
<td>N</td>
<td>–</td>
<td>–</td>
<td>5 / 8 / 10</td>
<td>G</td>
</tr>
<tr>
<td>T 10 digital</td>
<td>S 10</td>
<td>N</td>
<td>–</td>
<td>10 / 19</td>
<td>G</td>
<td>G</td>
</tr>
<tr>
<td>T 25 digital</td>
<td>S 25</td>
<td>N / KV / NK</td>
<td>–</td>
<td>8 / 10 / 19 / 25</td>
<td>G / F</td>
<td>G / F</td>
</tr>
<tr>
<td>T 50 digital</td>
<td>S / F 50</td>
<td>N</td>
<td>–</td>
<td>45 / 65 / 80</td>
<td>G / M / F</td>
<td>G / M / F</td>
</tr>
<tr>
<td>T 65 basic</td>
<td>S 65</td>
<td>KG – HH</td>
<td>G</td>
<td>65</td>
<td>G</td>
<td>G</td>
</tr>
<tr>
<td>T 65 digital</td>
<td>S 65</td>
<td>KG – HH</td>
<td>G</td>
<td>65</td>
<td>G</td>
<td>G</td>
</tr>
</tbody>
</table>

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KV = Ball bearing with vacuum-tight sliding-ring seal with silicon carbide seal rings
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**G = Proved configuration
W = Special element
**G = Coarse
M = Medium
F = Fine

IKA® Original | Dispersing tools
<table>
<thead>
<tr>
<th>Dispersing tools</th>
<th>Plastic disposable tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Ideal for applications where cross-contamination is not permitted</td>
<td></td>
</tr>
<tr>
<td>&gt; Disposable &amp; single-use</td>
<td></td>
</tr>
<tr>
<td>&gt; No cleaning required</td>
<td></td>
</tr>
</tbody>
</table>

### IKA® Original

#### Dispersing tools

<table>
<thead>
<tr>
<th>Dispersing element</th>
<th>T 10 basic</th>
<th>T 18 digital</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ident. No.</strong></td>
<td>0003304000</td>
<td>0000046398</td>
</tr>
<tr>
<td><strong>Working range</strong></td>
<td>0.5 – 10 ml</td>
<td>1 – 100 ml</td>
</tr>
<tr>
<td><strong>Stator diameter</strong></td>
<td>5 mm</td>
<td>10 mm</td>
</tr>
<tr>
<td><strong>Rotor diameter</strong></td>
<td>3.8 mm</td>
<td>7.5 mm</td>
</tr>
<tr>
<td><strong>Gap between rotor and stator</strong></td>
<td>0.1 mm</td>
<td>0.35 mm</td>
</tr>
<tr>
<td><strong>Min. / max. immersion depth</strong></td>
<td>20 / 75 mm</td>
<td>25 / 70 mm</td>
</tr>
<tr>
<td>** Shaft length**</td>
<td>92 mm</td>
<td>108 mm</td>
</tr>
<tr>
<td><strong>Materials in contact with medium</strong></td>
<td>PTFE, AISI 316L</td>
<td>PTFE, AISI 316L</td>
</tr>
<tr>
<td><strong>pH range</strong></td>
<td>2 – 13</td>
<td>2 – 13</td>
</tr>
<tr>
<td>** Suitable for solvents**</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>** Max. temperature**</td>
<td>180 °C</td>
<td>180 °C</td>
</tr>
<tr>
<td>** Sterilization methods**</td>
<td>all methods</td>
<td>all methods</td>
</tr>
</tbody>
</table>

<table>
<thead>
<tr>
<th>Dispersing element</th>
<th>S 10 D – 7 G – KS</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>Ident. No.</strong></td>
<td>00033045500</td>
</tr>
<tr>
<td><strong>Working range</strong></td>
<td>0.5 – 10 ml</td>
</tr>
<tr>
<td><strong>Stator diameter</strong></td>
<td>5 mm</td>
</tr>
<tr>
<td><strong>Rotor diameter</strong></td>
<td>3.8 mm</td>
</tr>
<tr>
<td><strong>Gap between rotor and stator</strong></td>
<td>0.1 mm</td>
</tr>
<tr>
<td><strong>Min. / max. immersion depth</strong></td>
<td>20 / 75 mm</td>
</tr>
<tr>
<td>** Shaft length**</td>
<td>92 mm</td>
</tr>
<tr>
<td><strong>Materials in contact with medium</strong></td>
<td>PTFE, AISI 316L</td>
</tr>
<tr>
<td><strong>pH range</strong></td>
<td>2 – 13</td>
</tr>
<tr>
<td>** Suitable for solvents**</td>
<td>yes</td>
</tr>
<tr>
<td>** Max. temperature**</td>
<td>180 °C</td>
</tr>
<tr>
<td>** Sterilization methods**</td>
<td>all methods</td>
</tr>
</tbody>
</table>

### IKA®+ Plastic disposable tools

<table>
<thead>
<tr>
<th>Dispersing tools</th>
<th>Plastic disposable tools</th>
</tr>
</thead>
<tbody>
<tr>
<td>&gt; Ideal for applications where cross-contamination is not permitted</td>
<td></td>
</tr>
<tr>
<td>&gt; Disposable &amp; single-use</td>
<td></td>
</tr>
<tr>
<td>&gt; No cleaning required</td>
<td></td>
</tr>
</tbody>
</table>

### Additional information

- **Maximum temperature**:
  - 180 °C
  - 180 °C

- **Sterilization methods**:
  - All methods
  - Autoclavable

- **Materials in contact with medium**:
  - PTFE, AISI 316L
  - Polycarbonate (PC)
## IKA® Original | Dispersing tools

### T 25 digital

<table>
<thead>
<tr>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
<th></th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident. No.</td>
<td>0001025300</td>
<td>0000249600</td>
<td>0000249800</td>
<td>0002494700</td>
<td></td>
</tr>
<tr>
<td>Working range</td>
<td>1 – 50 ml</td>
<td>10 – 1500 ml</td>
<td>10 – 1500 ml</td>
<td>25 – 1500 ml</td>
<td></td>
</tr>
<tr>
<td>Stator diameter</td>
<td>6 mm</td>
<td>10 mm</td>
<td>18 mm</td>
<td>19 mm</td>
<td></td>
</tr>
<tr>
<td>Rotor diameter</td>
<td>6.1 mm</td>
<td>7.5 mm</td>
<td>12.7 mm</td>
<td>12.7 mm</td>
<td></td>
</tr>
<tr>
<td>Gap between rotor and stator</td>
<td>0.25 mm</td>
<td>0.35 mm</td>
<td>0.3 mm</td>
<td>0.3 mm</td>
<td></td>
</tr>
<tr>
<td>Min. / max. immersion depth</td>
<td>27 / 85 mm</td>
<td>22 / 85 mm</td>
<td>40 / 165 mm</td>
<td>40 / 225 mm</td>
<td>40 / 165 mm</td>
</tr>
<tr>
<td>Shaft length</td>
<td>108 mm</td>
<td>105 mm</td>
<td>194 mm</td>
<td>194 mm</td>
<td></td>
</tr>
<tr>
<td>Materials in contact with medium</td>
<td>PTFE, AISI 316L</td>
<td>PTFE, AISI 316L</td>
<td>PPY, AISI 316L</td>
<td>PPY, AISI 316L</td>
<td>PPY, AISI 316L</td>
</tr>
<tr>
<td>pH range</td>
<td>2 – 13</td>
<td>2 – 13</td>
<td>2 – 13</td>
<td>2 – 13</td>
<td></td>
</tr>
<tr>
<td>Suitable for solvents</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
<td></td>
</tr>
<tr>
<td>Max. temperature</td>
<td>180 ºC</td>
<td>180 ºC</td>
<td>180 ºC</td>
<td>180 ºC</td>
<td></td>
</tr>
<tr>
<td>Sterilization methods</td>
<td>all methods</td>
<td>all methods</td>
<td>all methods</td>
<td>wet chemical</td>
<td>wet chemical</td>
</tr>
<tr>
<td>Min. vacuum</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>6 bar</td>
<td>–</td>
</tr>
<tr>
<td>Max. pressure</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
<td>–</td>
</tr>
</tbody>
</table>

### T 50 digital

<table>
<thead>
<tr>
<th>Dispensing element</th>
<th>S 50 N – G 45 G</th>
<th>S 50 N – G 45 M</th>
<th>S 50 N – G 45 F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident. No.</td>
<td>0001000300</td>
<td>0001300300</td>
<td>000200300</td>
</tr>
<tr>
<td>Working range</td>
<td>0.5 – 200 ml</td>
<td>0.5 – 150 ml</td>
<td>0.25 – 10 ml</td>
</tr>
<tr>
<td>Stator diameter</td>
<td>45 mm</td>
<td>45 mm</td>
<td>45 mm</td>
</tr>
<tr>
<td>Rotor diameter</td>
<td>36 mm</td>
<td>40.5 mm</td>
<td>40 mm</td>
</tr>
<tr>
<td>Gap between rotor and stator</td>
<td>0.5 mm</td>
<td>0.25 mm</td>
<td>0.5 mm</td>
</tr>
<tr>
<td>Min. / max. immersion depth</td>
<td>70 / 250 mm</td>
<td>70 / 250 mm</td>
<td>70 / 250 mm</td>
</tr>
<tr>
<td>Shaft length</td>
<td>300 mm</td>
<td>290 mm</td>
<td>290 mm</td>
</tr>
<tr>
<td>Materials in contact with medium</td>
<td>PTFE, AISI 316L</td>
<td>PTFE, AISI 316L</td>
<td>PPY, AISI 316L</td>
</tr>
<tr>
<td>pH range</td>
<td>2 – 13</td>
<td>2 – 13</td>
<td>2 – 13</td>
</tr>
<tr>
<td>Suitable for solvents</td>
<td>yes</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Max. temperature</td>
<td>180 ºC</td>
<td>180 ºC</td>
<td>180 ºC</td>
</tr>
<tr>
<td>Sterilization methods</td>
<td>all methods</td>
<td>all methods</td>
<td>all methods</td>
</tr>
</tbody>
</table>

### T 25 basic l digital

<table>
<thead>
<tr>
<th>Dispensing element</th>
<th>S 50 N – G 65 M</th>
<th>S 50 N – G 65 F</th>
</tr>
</thead>
<tbody>
<tr>
<td>Ident. No.</td>
<td>0000001050</td>
<td>0000001050</td>
</tr>
<tr>
<td>Working range</td>
<td>2 – 50 ml</td>
<td>2 – 50 ml</td>
</tr>
<tr>
<td>Stator diameter</td>
<td>65 mm</td>
<td>65 mm</td>
</tr>
<tr>
<td>Rotor diameter</td>
<td>58 mm</td>
<td>58 mm</td>
</tr>
<tr>
<td>Gap between rotor and stator</td>
<td>0.5 mm</td>
<td>0.5 mm</td>
</tr>
<tr>
<td>Min. / max. immersion depth</td>
<td>250 / 450 mm</td>
<td>250 / 450 mm</td>
</tr>
<tr>
<td>Shaft length</td>
<td>290 mm</td>
<td>290 mm</td>
</tr>
<tr>
<td>Materials in contact with medium</td>
<td>PPY, AISI 316L</td>
<td>PPY, AISI 316L</td>
</tr>
<tr>
<td>pH range</td>
<td>2 – 13</td>
<td>2 – 13</td>
</tr>
<tr>
<td>Suitable for solvents</td>
<td>yes</td>
<td>yes</td>
</tr>
<tr>
<td>Max. temperature</td>
<td>180 ºC</td>
<td>180 ºC</td>
</tr>
<tr>
<td>Sterilization methods</td>
<td>all methods</td>
<td>all methods</td>
</tr>
<tr>
<td>Min. vacuum</td>
<td>1 ml</td>
<td>1 ml</td>
</tr>
<tr>
<td>Max. pressure</td>
<td>6 bar</td>
<td>6 bar</td>
</tr>
</tbody>
</table>

---

**Example of the S 50 N – G 45 M dispersing element set-up**
Saw Tooth (ST) dispersing tools

- ST tools are recommended for use with tissue and other fibrous materials.
- Saw tooth design creates a cutting and tearing action for shredding fibrous materials.
- Made of high quality stainless steel.

**IKA® Original | Special dispersing tools**

### T 10 basic

- **Dispensing element**: S 10 N – 8 G – ST | S 10 N – 10 G – ST
- **Ident. No.**: 0004446900 | 0004447100
- **Working range**: 1 – 50 ml | 1 – 100 ml
- **Stator diameter**: 8 mm | 10 mm
- **Rotor diameter**: 6.1 mm | 7.6 mm
- **Gap between rotor and stator**: 0.25 mm | 0.3 mm
- **Min./Max. immersion depth**: 20 / 95 mm | 20 / 100 mm
- **Shaft length**: 115 mm
- **Materials in contact with medium**: PTFE, AISI 316L

### T 25 digital

- **Ident. No.**: 0004446500 | 0004447300 | 0004447500
- **Working range**: 1 – 50 ml | 1 – 100 ml | 10 – 1500 ml | 50 – 2000 ml
- **Stator diameter**: 8 mm | 10 mm | 18 mm | 25 mm
- **Rotor diameter**: 6.1 mm | 7.5 mm | 12.7 mm | 17 mm
- **Gap between rotor and stator**: 0.25 mm | 0.3 mm | 0.3 mm | 0.5 mm
- **Min./Max. immersion depth**: 20 / 95 mm | 20 / 100 mm | 40 / 165 mm | 40 / 165 mm
- **Shaft length**: 115 mm | 115 mm | 194 mm | 194 mm
- **Materials in contact with medium**: PTFE, AISI 316L

### T 50 digital

- **Dispensing element**: R 50 “high speed” stirring shaft
- **Ident. No.**: 0001689300
- **Working range**: 0.25 – 30 l
- **Max. circumferential speed**: 15.7 – 23 m/s
- **Stator diameter**: 45 mm
- **Max. permissible rotor diameter**: 36 mm
- **Material**: Stainless steel (AISI 316L)
- **Gap between rotor and stator**: 0.3 mm
- **Min./Max. immersion depth**: 70 / 250 mm
- **Shaft length**: 300 mm
- **Available seals**: S 50 N

### Silentstream

- The flow breaker is used to prevent vortexing and to minimize air induction into the medium.
- **Ident. No.**: 0003754000
- Fits the following dispensing elements:
  - S 25 N – 18 G
  - S 25 N – 25 G
  - S 25 N – 25 F
  - S 25 N – 19 G
  - S 18 N – 19 G
IKA® has created a milestone for entering a new era of “sample preparation” with a revolutionary discovery – the unique and patented ULTRA-TURRAX® Tube Drive (UTTD) system. Disperse, stir, homogenize and grind using a single drive unit. The UTTD provides high repeatability and reproducibility to cover a broad range of applications.

**Technical data**

<table>
<thead>
<tr>
<th>ULTRA-TURRAX® Tube Drive control</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor rating input / output</td>
</tr>
<tr>
<td>20 / 17 W</td>
</tr>
<tr>
<td>Speed range / Turbo speed</td>
</tr>
<tr>
<td>400 – 6000 rpm / 8000 rpm</td>
</tr>
<tr>
<td>Display</td>
</tr>
<tr>
<td>OLED</td>
</tr>
<tr>
<td>Timer</td>
</tr>
<tr>
<td>10 s – 30 min (ininitely adjustable)</td>
</tr>
<tr>
<td>Reverse rotation interval</td>
</tr>
<tr>
<td>10 – 60 s</td>
</tr>
<tr>
<td>Dimensions (W x D x H)</td>
</tr>
<tr>
<td>122 x 178 x 48 mm</td>
</tr>
<tr>
<td>Weight</td>
</tr>
<tr>
<td>1.0 kg</td>
</tr>
<tr>
<td>Protection class DIN EN 60529</td>
</tr>
<tr>
<td>yes</td>
</tr>
<tr>
<td>Interface</td>
</tr>
<tr>
<td>yes</td>
</tr>
<tr>
<td>Voltage</td>
</tr>
<tr>
<td>100 – 240 V</td>
</tr>
<tr>
<td>Frequency</td>
</tr>
<tr>
<td>50/60 Hz</td>
</tr>
</tbody>
</table>

**Multilingual OLED display**

- for simple and precise menu navigation
- for start/stop operation
- to optimize mixing and crushing performance
- to vary the speed and the pressing knob

**Built-in program library**

- for tests to be repeated under identical conditions
- for built-in program library

**Rotating knob**

- to vary the speed

**Reverse rotation switch**

- for optimizing mixing and crushing performance

**USB interface**

- to control and document all the parameters
- using labworldsoft® software and for updating your firmware

**OLED display**

- for simple and precise menu navigation

**Compatible accessories**

- Covers
- Balls

**Try our new reusable tube racks and single-tube holders! Please contact IKA® Service Department E-Mail: service@ika.de**

**Accessories | IKA® Tubes**

**ST Tube with stirring device**

- Suitable for:
  - mixing
  - homogenization
  - extractions
  - preparation of soil sample suspensions

<table>
<thead>
<tr>
<th>Tube size</th>
<th>Ident. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 ml</td>
<td>ST-20</td>
</tr>
<tr>
<td>50 ml</td>
<td>ST-50</td>
</tr>
<tr>
<td>20 ml gamma</td>
<td>ST-20-M gamma</td>
</tr>
<tr>
<td>50 ml gamma</td>
<td>ST-50-M gamma</td>
</tr>
</tbody>
</table>

**DT Tube with rotor-stator element**

- Suitable for:
  - dispersion
  - homogenization
  - pharmacokinetics
  - metabolism studies

<table>
<thead>
<tr>
<th>Tube size</th>
<th>Ident. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 ml</td>
<td>DT-20</td>
</tr>
<tr>
<td>50 ml</td>
<td>DT-50</td>
</tr>
<tr>
<td>20 ml gamma</td>
<td>DT-20-M gamma</td>
</tr>
<tr>
<td>50 ml gamma</td>
<td>DT-50-M gamma</td>
</tr>
</tbody>
</table>

**BMT G5 Tube for grinding with glass balls (G) or with stainless steel balls (S)**

- Suitable for:
  - dry milling of dry and brittle samples (e.g. kaolin, gypsum, colored pigments, tablets)
  - cell maceration
  - processing of materials mixed with fluids

<table>
<thead>
<tr>
<th>Tube size</th>
<th>Ident. No.</th>
</tr>
</thead>
<tbody>
<tr>
<td>20 ml</td>
<td>BMT-20-G</td>
</tr>
<tr>
<td>50 ml</td>
<td>BMT-50-G</td>
</tr>
<tr>
<td>20 ml gamma</td>
<td>BMT-20-M gamma</td>
</tr>
<tr>
<td>50 ml gamma</td>
<td>BMT-50-M gamma</td>
</tr>
</tbody>
</table>

**Covers**

- TC-20 (10 pieces) 0003749800
- TC-50 (10 pieces) 0003749900
- TC-50M (10 pieces) 0003750000

**Balls**

- Glass balls Ø 6 mm 250 g 0003598200
- Stainless steel balls Ø 5 mm 250 g 0003598300
UTTD is ideal for preparing samples in an easier, faster, simpler and safer method.

Special UTTD features:
- Simple and safe disposal
- Sealed disposable sample tubes
- No cross-contamination
- No cleaning required
- Reproducible tests supports GLP and GMP reporting
- Chemical resistant plastic
- Patented
- Available sterile
- Available with pierceable lids
- Batch traceability ensured

The UTTD tube drive system, with its universal single use tubes is particularly suitable for processing infectious, toxic and high odor sample materials. Tests can be reproduced at any time with no risk of cross-contamination between individual samples.
One machine for numerous mixing and homogenization tasks. Same working modules for laboratory and production.

1. Module DISPAR-REACTOR® DR
2. Module MK/MKO (Geloid Mill/Cone Mill)
3. Module MHD (mixing, homogenizing, dispersing)
4. Module CMS

**Technical data**

<table>
<thead>
<tr>
<th>Specification</th>
<th>Value</th>
</tr>
</thead>
<tbody>
<tr>
<td>Motor power</td>
<td>900 W</td>
</tr>
<tr>
<td>Speed range (40 m/s)</td>
<td>3000 – 26,000 rpm</td>
</tr>
<tr>
<td>Operating voltage</td>
<td>230 – 244 V</td>
</tr>
<tr>
<td>Frequency</td>
<td>50 – 60 Hz</td>
</tr>
<tr>
<td>Process pressure</td>
<td>up to 2.5 bar</td>
</tr>
<tr>
<td>Product temperature in continuous operation</td>
<td>up to 120°C</td>
</tr>
<tr>
<td>Materials in contact with the medium</td>
<td>Stainless steel (AISI 316L and AISI 316Ti)</td>
</tr>
<tr>
<td>Shaft sealing ring</td>
<td>Standard FPM</td>
</tr>
<tr>
<td>Elastomers in the working chamber</td>
<td>optional EPDM (FDA), FFPM</td>
</tr>
<tr>
<td>Dimensions (W x D x H)</td>
<td>170 x 270 x 215 mm</td>
</tr>
</tbody>
</table>

**magic LAB®**

<table>
<thead>
<tr>
<th>Feature</th>
<th>Benefits</th>
</tr>
</thead>
<tbody>
<tr>
<td>Designed for mixing, dispersing, wet milling and for the incorporation of powders into liquids</td>
<td>&gt; Ideal machine for continuous, circulating and batch processing with interchangeable modules</td>
</tr>
<tr>
<td>Ensures reliable scale-up from formulation development to mass production</td>
<td>&gt; Optimal results due to rotor tip speed up to 40 m/s</td>
</tr>
<tr>
<td>Easy and quick exchange of each module</td>
<td>&gt; Simple heating or cooling of all modules</td>
</tr>
<tr>
<td>Flexibility and ease of use: one machine suits for many applications</td>
<td>&gt; Easy and quick exchange of each module</td>
</tr>
</tbody>
</table>

Multifunction storage and transportation box

**magic LAB® with module CMS**
- Mixing, homogenizing, dispersing

**magic LAB® with module Micro-Plant 1 l**
- Wet milling and for the incorporation of powders into liquids

**magic LAB® with module Micro-Plant 2 l**
- For dispersing/mixing in a batch operation

**magic LAB® with module UTC**
- For powder/granule incorporation into liquids in recirculation mode

**magic LAB® with module CMS and accessories**
- For powder/granule incorporation into liquids in recirculation mode

**magic LAB® with module UTL**
- Designed for mixing, dispersing, wet milling and for the incorporation of powders into liquids
- Ideal machine for continuous, circulating and batch processing with interchangeable modules
- Ensures reliable scale-up from formulation development to mass production
- Optimal results due to rotor tip speed up to 40 m/s
- Simple heating or cooling of all modules
- Easy and quick exchange of each module
- Flexibility and ease of use: one machine suits for many applications
What does “continuous operation” mean for dispersers? Are 4 hours OK?
4 hours equates to continuous operation! A further particle size reduction with rotor-stator systems does not happen after more than 15 mins. Only heat (due to friction) is transferred into the medium. For the drive itself, continuous operation is not a problem.

Due to the technical data, the ambient temperature of a disperser is 5 – 40 °C. What can be done, if the sample requires higher temperatures?
The prescribed ambient temperature of 5 – 40 °C is only valid for the drive. Of course, it is possible to work in mediums with higher temperatures, e.g. a dispersing element with "N" (PTFE) bearing can be used in mediums up to 180 °C.

Is it possible to disperse an abrasive material such as sand, glass or similar material?
In general, it is possible to disperse abrasive material, but a frequent change of the bearing is necessary. In addition, the shaft and spindle can wear off very quickly under these conditions.

Is it possible to disperse frozen samples?
Yes, in general this is possible if the sample is treated in some liquid. However, it is not possible to work with liquid nitrogen.

The teflon seal (PTFE) of my dispersing element is ripped. Can a new one be ordered?
The PTFE parts are slotted and it is not a defect. They are used as a bearing. However, a new seal may be ordered from the spare parts list.

How often can we use disposable dispersing elements for the T 10 basic, T 18 basic and T 25 digital?
The disposable dispersing tools are designed for single use only.

Does IKA® offer high pressure dispersers?
Yes, it is possible to work under a pressure of up to 6 bar with dispersing tools having "KV" in their product description. IKA® also offers High Pressure Homogenizer system.

How does one avoid foam generation during dispersing?
To avoid this scenario, a ULTRA-TURRAX® disperser with "KV" tools are recommended. These tools are closed systems, which avoid the generation of foam.

Which is the right dispersing tool to crush vegetables and fruits? How should one clean this properly (sterile)?
The new Saw Tooth (ST) dispersing tools and a T 50 digital with cutting head S 50 N - W 65 SK would be suitable for this application. This tool can be cleaned, e.g. with acetone or every commonly used sterilization method.

FAQ

IKA® laboratory software labworldsoft® is an advanced software for all your laboratory needs. With the help of this software, you can network up to 64 laboratory devices via one PC. All test parameters can be documented ensuring complete automation of your laboratory experiments. Measurements and processes may be run independently. Long waits and processing times are reduced, which increases productivity.

FAQ

IKA® Application Support

Our Application Center spans 400 sqm and offers modern facilities for presenting and testing lab devices and processes. This brings us even closer to our customers and improves our service. Here, prospective buyers and customers can test out processes that involve stirring, shaking, dispersing, grinding, heating, analyzing and distilling. In addition, it also further extends the opportunity to test your own devices and to develop new models.
Ordering made easy!
For more information about our products and to place your order, please visit:
www.ika.com