

# Dispersers

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**designed**  
to work perfectly

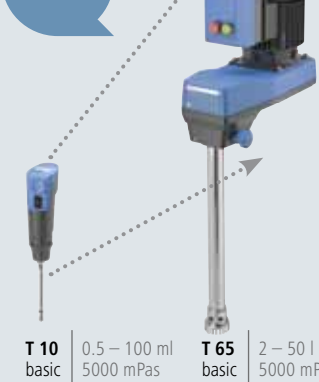
# Dispersers | From Invention to Innovation

IKA®+

### Scale-up principle

IKA® dispersers have a high degree of flexibility and scalability. Therefore, ensuring reliable scale-up by offering the possibility to work with the same method from formulation development to production.

1:50



### 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 (H<sub>2</sub>O) 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.



Patented

3 Year warranty\*

\* 2+1 years after registering at [www.ika.com/register](http://www.ika.com/register), glassware and wearing parts excluded



Protection class according to DIN EN 60529: IP 42



# T-series | Innovative solutions for dispersion technology



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.

-  **Digital display** for precise monitoring of set and actual speeds
-  Wide selection of dispersing tools to suit your application
-  **Rotating knob** for adjusting the speed



**Motor protection** against overload



**Quick-connect coupling** to exchange dispersing tools easily



**2+1 year** after registering at [www.ika.com/register](http://www.ika.com/register)

**IKA®+**

### Trial devices

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



# Special features | Accessories



- 1 Plate stands**
  - R 1825 560 mm
  - R 1826 800 mm
  - R 1827 1000 mmWith slip resistant foil.

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



- 2 R 182 Boss head clamp**

Ident. No.  
0002657700



- 3 Dispersing element**  
S 25 N – 18 G

Ident. No.  
0000593400

**IKA®+**

To get customized and additional accessories, please visit [www.ika.com/service](http://www.ika.com/service)





Technical data | T-series ULTRA-TURRAX® Dispersers



- T10 standard PCR Kit Includes:
- > T 10 basic
  - > Clamp R 200
  - > Storage case
  - > Dispersing elements
    - > S 10 D - 7 G - KS - 65
    - > S 10 D - 7 G - KS - 110
    - > 12 x S 10 D - 7 G - KS - 65



Dispersing tools are not included in delivery

Technical data

|                                 |                                    |
|---------------------------------|------------------------------------|
| Motor rating input / output     | 125 / 75 W                         |
| Volume range (H <sub>2</sub> O) | 0.5 – 100 ml                       |
| Viscosity max.                  | 5000 mPas                          |
| Speed range                     | 8000 – 30,000   8,000 - 26,000 rpm |
| Speed display                   | scale                              |
| 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                           |

T 10 basic | T 10 standard PCR kit

|                                 |                                    |
|---------------------------------|------------------------------------|
| Motor rating input / output     | 125 / 75 W                         |
| Volume range (H <sub>2</sub> O) | 0.5 – 100 ml                       |
| Viscosity max.                  | 5000 mPas                          |
| Speed range                     | 8000 – 30,000   8,000 - 26,000 rpm |
| Speed display                   | scale                              |
| 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 | 0004095500



T 18 digital

|                                 |                   |
|---------------------------------|-------------------|
| Motor rating input / output     | 500 / 300 W       |
| Volume range (H <sub>2</sub> O) | 1 – 1500 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 271 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 (H <sub>2</sub> O) | 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 271 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



reddot design award  
winner 2012

Dispersing tools are not included in delivery

Technical data

|                                 |                    |
|---------------------------------|--------------------|
| Motor rating input / output     | 1100 / 700 W       |
| Volume range (H <sub>2</sub> O) | 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          | 16 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           |

T 50 digital

|                                 |                    |
|---------------------------------|--------------------|
| Motor rating input / output     | 1100 / 700 W       |
| Volume range (H <sub>2</sub> O) | 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          | 16 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 (H <sub>2</sub> O) | 2 – 50 l           |
| Viscosity max.                  | 5000 mPas          |
| Speed range                     | 7200 rpm (fixed)   |
| Speed display                   | –                  |
| Speed control                   | fixed              |
| Noise without element           | 75 dB(A)           |
| Extension arm diameter          | flange             |
| Extension arm length            | flange             |
| 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 54              |
| Interface                       | no                 |
| Voltage                         | 3 x 400 V          |
| Frequency                       | 50 Hz              |

Ident. No. 0004023500



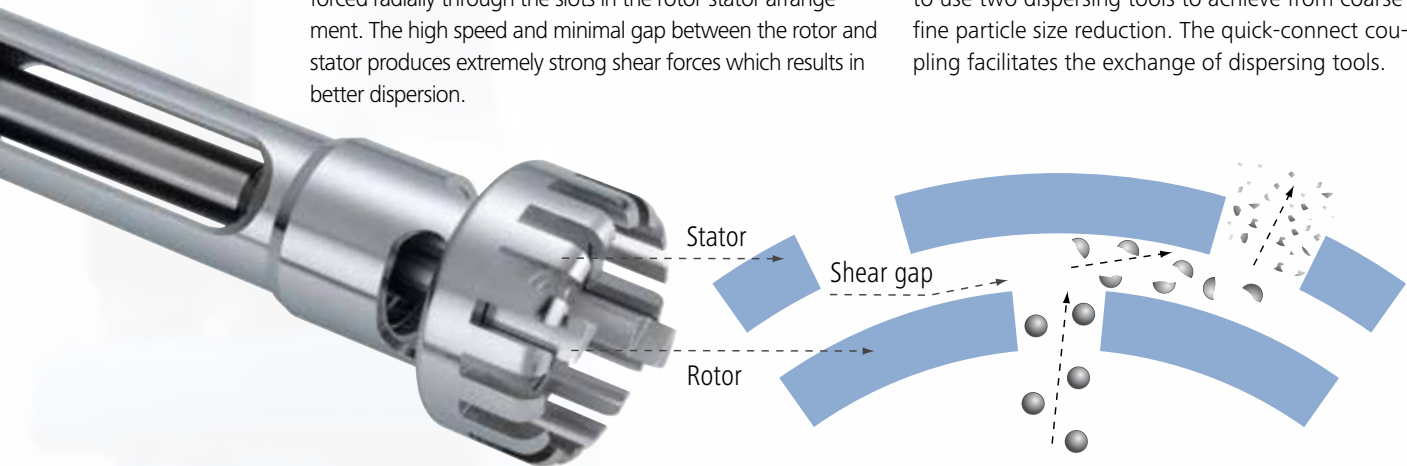
T 65 digital

|                                 |                    |
|---------------------------------|--------------------|
| Motor rating input / output     | 2600 / 2200 W      |
| Volume range (H <sub>2</sub> O) | 2 – 50 l           |
| Viscosity max.                  | 5000 mPas          |
| Speed range                     | 1000 – 9500 rpm    |
| Speed display                   | LED                |
| Speed control                   | stepless           |
| Noise without element           | 75 dB(A)           |
| Extension arm diameter          | flange             |
| Extension arm length            | flange             |
| 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 54              |
| Interface                       | no                 |
| Voltage                         | 3 x 400 V          |
| Frequency                       | 50/60 Hz           |

Ident. No. 0004234500

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.

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 | Dispersing element Shaft / Agitator shaft | With seal or bearing type* | Generator or element** | With outer diameter (mm) | Degree of fineness achieved*** |
|---------------------------|-------------------------------------------|----------------------------|------------------------|--------------------------|--------------------------------|
| T 10 basic                | S 10                                      | N                          | —                      | 5 / 8 / 10               | G                              |
| T 18 digital              | S 18                                      | N                          | —                      | 10 / 19                  | G                              |
| T 25 digital              | S 25                                      | N / KV / NK / KR           | —                      | 8 / 10 / 18 / 19 / 25    | G / F                          |
| T 50 digital              | S / R 50                                  | N / B / KR                 | G / W                  | 45 / 65 / 80             | G / M / F                      |
| T 65 basic                | S 65                                      | KG – HH / KR               | G                      | 65                       | G / M / F                      |
| T 65 digital              | S 65                                      | KG – HH / KR               | G                      | 65                       | G / M / F                      |

- \*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
- B

= Bronze bearing
- KR

= Ball bearing with FKM or FFPM seal
- \*\*G

= Proved configuration
- W

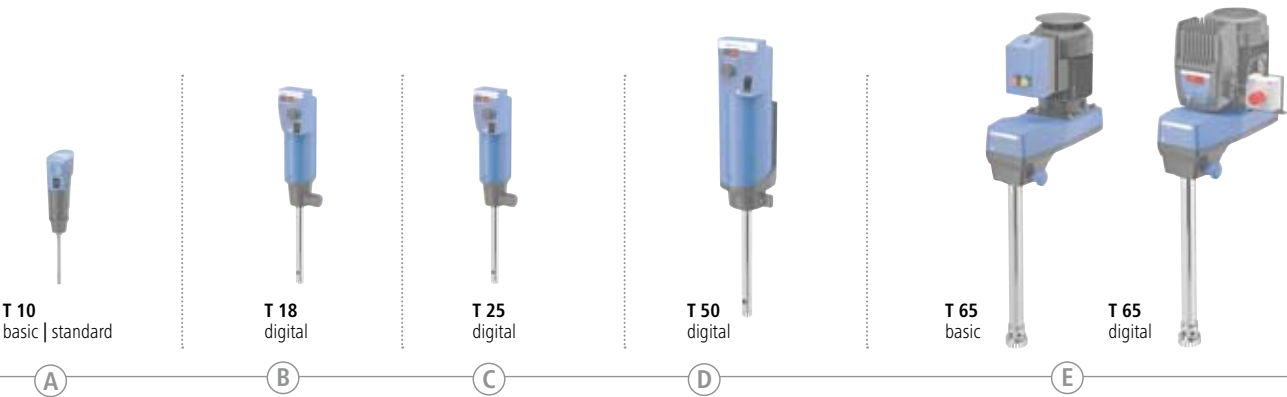
= Special element
- \*\*\*G

= Coarse
- M

= Medium
- F

= Fine

| Volume Range<br>Liter | 10 ml                   | 50 ml | 100 ml | 500 ml | 2 l | 10 l | 20 l | 50 l | Vacuum<br>operation | Circumferential<br>speed (m/s) | Ultimate fineness,<br>suspensions (µm) | Ultimate fineness,<br>emulsions (µm) |
|-----------------------|-------------------------|-------|--------|--------|-----|------|------|------|---------------------|--------------------------------|----------------------------------------|--------------------------------------|
|                       |                         |       |        |        |     |      |      |      |                     |                                |                                        |                                      |
| A                     | S 10 N – 5 G            |       |        |        |     |      |      |      | No                  | 6.0                            | 5 – 25                                 | 1 – 10                               |
|                       | S 10 N – 8 G            |       |        |        |     |      |      |      | No                  | 9.6                            | 5 – 25                                 | 1 – 10                               |
|                       | S 10 N – 10 G           |       |        |        |     |      |      |      | No                  | 11.9                           | 5 – 25                                 | 1 – 10                               |
|                       | S 10 D – 7 G – KS – 65  |       |        |        |     |      |      |      | No                  | 7.5                            | 10 – 50                                | 5 – 20                               |
|                       | S 10 D – 7 G – KS – 110 |       |        |        |     |      |      |      | No                  | 7.5                            | 10 – 50                                | 5 – 20                               |
| B                     | S 18 N – 10 G           |       |        |        |     |      |      |      | No                  | 9.8                            | 10 – 50                                | 1 – 10                               |
|                       | S 18 N – 19 G           |       |        |        |     |      |      |      | No                  | 16.6                           | 10 – 50                                | 1 – 10                               |
|                       | S 18 D – 10 G – KS      |       |        |        |     |      |      |      | No                  | 8.8                            | 10 – 50                                | 5 – 20                               |
|                       | S 18 D – 14 G – KS      |       |        |        |     |      |      |      | No                  | 12.4                           | 10 – 50                                | 5 – 20                               |
|                       | S 25 N – 8 G            |       |        |        |     |      |      |      | No                  | 8                              | 10 – 50                                | 1 – 10                               |
| C                     | S 25 N – 10 G           |       |        |        |     |      |      |      | No                  | 9.8                            | 10 – 50                                | 1 – 10                               |
|                       | S 25 N – 18 G           |       |        |        |     |      |      |      | No                  | 16.6                           | 10 – 50                                | 1 – 10                               |
|                       | S 25 KV – 18 G          |       |        |        |     |      |      |      | Yes                 | 16.6                           | 10 – 50                                | 1 – 10                               |
|                       | S 25 NK – 19 G          |       |        |        |     |      |      |      | No                  | 16.6                           | 10 – 50                                | 1 – 10                               |
|                       | S 25 N – 25 G           |       |        |        |     |      |      |      | No                  | 22.3                           | 15 – 50                                | 1 – 10                               |
| D                     | S 25 KV – 25 G          |       |        |        |     |      |      |      | Yes                 | 22.3                           | 15 – 50                                | 1 – 10                               |
|                       | S 25 N – 25 F           |       |        |        |     |      |      |      | No                  | 23.6                           | 5 – 25                                 | 1 – 5                                |
|                       | S 25 KV – 25 F          |       |        |        |     |      |      |      | Yes                 | 23.6                           | 5 – 25                                 | 1 – 5                                |
|                       | S 25 D – 10 G – KS      |       |        |        |     |      |      |      | No                  | 8.8                            | 10 – 50                                | 5 – 20                               |
|                       | S 25 D – 14 G – KS      |       |        |        |     |      |      |      | No                  | 12.4                           | 10 – 50                                | 5 – 20                               |
| E                     | S 25 - KR - 18 G        |       |        |        |     |      |      |      | Yes                 | 16.5                           | 10 - 50                                | 1 - 10                               |
|                       | S 25 - KR - 25 G        |       |        |        |     |      |      |      | Yes                 | 22.2                           | 15 - 50                                | 1 - 10                               |
|                       | S 25 - KR - 25 F        |       |        |        |     |      |      |      | Yes                 | 23.6                           | 5 - 25                                 | 1 - 5                                |
|                       | S 50 N – G 45 G         |       |        |        |     |      |      |      | No                  | 18.8                           | 40 – 100                               | 10 – 30                              |
|                       | S 50 N – G 45 M         |       |        |        |     |      |      |      | No                  | 21.2                           | 25 – 50                                | 5 – 20                               |
| F                     | S 50 N – G 45 F         |       |        |        |     |      |      |      | No                  | 20.9                           | 10 – 30                                | 1 – 10                               |
|                       | S 50 B - G 45 G         |       |        |        |     |      |      |      | No                  | 18.8                           | 40 - 100                               | 10 - 30                              |
|                       | S 50 B - G 45 M         |       |        |        |     |      |      |      | No                  | 21.2                           | 25 - 50                                | 5 - 20                               |
|                       | S 50 B - G 45 F         |       |        |        |     |      |      |      | No                  | 20.9                           | 10 - 30                                | 1 - 10                               |
|                       | S 50 KR - G 45 G        |       |        |        |     |      |      |      | Yes                 | 18.8                           | 40 - 100                               | 10 - 30                              |
| G                     | S 50 KR - G 45 M        |       |        |        |     |      |      |      | Yes                 | 21.2                           | 25 - 50                                | 5 - 20                               |
|                       | S 50 KR - G 45 F        |       |        |        |     |      |      |      | Yes                 | 20.9                           | 10 - 30                                | 1 - 10                               |
|                       | S 50 KG - HH - G 45 G   |       |        |        |     |      |      |      | Yes                 | 18.8                           | 40 - 100                               | 10 - 30                              |
|                       | S 50 KG - HH - G 45 M   |       |        |        |     |      |      |      | Yes                 | 21.2                           | 25 - 50                                | 5 - 20                               |
|                       | S 50 KG - HH - G 45 F   |       |        |        |     |      |      |      | Yes                 | 20.9                           | 10 - 30                                | 1 - 10                               |
| H                     | S 65 KG – HH – G 65 G   |       |        |        |     |      |      |      | Yes                 | 21.9 (28.8: T 65 digital)      | 25 – 75                                | 5 – 25                               |
|                       | S 65 KG – HH – G 65 M   |       |        |        |     |      |      |      | Yes                 | 21.9 (28.8: T 65 digital)      | 25 – 50                                | 5 – 15                               |
|                       | S 65 KG – HH – G 65 F   |       |        |        |     |      |      |      | Yes                 | 21.9 (28.8: T 65 digital)      | 5 – 20                                 | 1 – 10                               |
|                       | S 65 KR - G 65 G        |       |        |        |     |      |      |      | Yes                 | 21.9 (28.8: T 65 digital)      | 25 – 75                                | 5 – 25                               |
|                       | S 65 KR - G 65 M        |       |        |        |     |      |      |      | Yes                 | 21.9 (28.8: T 65 digital)      | 25 – 50                                | 5 – 15                               |
| I                     | S 65 KR - G 65 F        |       |        |        |     |      |      |      | Yes                 | 21.9 (28.8: T 65 digital)      | 5 – 20                                 | 1 – 10                               |



IKA® Original | Dispersing tools

IKA+  
Plastic disposable  
tools D

> Ideal for applications  
where cross-contamination  
is not permitted  
> Disposable & single-use  
> No cleaning required



| T 10 basic   T 10 standard       |                 |                 |                 |                                        |                                        |
|----------------------------------|-----------------|-----------------|-----------------|----------------------------------------|----------------------------------------|
| Dispersing element               | S 10 N - 5 G    | S 10 N - 8 G    | S 10 N - 10 G   | S 10 D - 7 G - KS - 65                 | S 10 D - 7 G - KS - 110                |
| Ident. No.                       | 0003304000      | 0003305500      | 0003370100      | 0020002076 (24 pcs.)                   | 0020002075 (24 pcs.)                   |
| Working range                    | 0.5 – 10 ml     | 1 – 50 ml       | 1 – 100 ml      | 1 – 20 ml                              | 1 – 40 ml                              |
| Stator diameter                  | 5 mm            | 8 mm            | 10 mm           | 7 mm                                   | 7 mm                                   |
| Rotor diameter                   | 3.8 mm          | 6.1 mm          | 7.6 mm          | 4.8 mm                                 | 4.8 mm                                 |
| Gap between rotor and stator     | 0.1 mm          | 0.25 mm         | 0.2 mm          | 0.3 mm                                 | 0.3 mm                                 |
| Min. / max. immersion depth      | 20 / 75 mm      | 20 / 95 mm      | 20 / 100 mm     | 20 / 50 mm                             | 20 / 90 mm                             |
| Shaft length                     | 92 mm           | 115 mm          | 115 mm          | 65 mm                                  | 110 mm                                 |
| Materials in contact with medium | PTFE, AISI 316L | PTFE, AISI 316L | PTFE, AISI 316L | Polycarbonate (PC)<br>Polysulfon (PSU) | Polycarbonate (PC)<br>Polysulfon (PSU) |
| pH range                         | 2 – 13          | 2 – 13          | 2 – 13          | –                                      | –                                      |
| Suitable for solvents            | yes             | yes             | yes             | –                                      | –                                      |
| Max. temperature                 | 180 °C          | 180 °C          | 180 °C          | 100 °C                                 | 100 °C                                 |
| Sterilization methods            | all methods     | all methods     | all methods     | yes, autoclavable                      | yes, autoclavable                      |
|                                  | 1               | 2               | 3               | 4 D                                    | 5 D                                    |



| T 18 digital                     |                 |                 |                                                  |                                                  |
|----------------------------------|-----------------|-----------------|--------------------------------------------------|--------------------------------------------------|
| Dispersing element               | S 18 N - 10 G   | S 18 N - 19 G   | S 18 D - 10 G - KS                               | S 18 D - 14 G - KS                               |
| Ident. No.                       | L004639         | L004640         | 0003452400                                       | 0003452300                                       |
| Working range                    | 1 – 100 ml      | 10 – 1500 ml    | 10 – 100 ml                                      | 10 – 500 ml                                      |
| Stator diameter                  | 10 mm           | 19 mm           | 10 mm                                            | 14 mm                                            |
| Rotor diameter                   | 7.5 mm          | 12.7 mm         | 6.75 mm                                          | 9.5 mm                                           |
| Gap between rotor and stator     | 0.35 mm         | 0.4 mm          | 0.25 mm                                          | 0.35 mm                                          |
| Min. / max. immersion depth      | 25 / 70 mm      | 35 / 170 mm     | 15 / 85 mm                                       | 15 / 85 mm                                       |
| Shaft length                     | 108 mm          | 204 mm          | 150 mm                                           | 150 mm                                           |
| Materials in contact with medium | PTFE, AISI 316L | PTFE, AISI 316L | Polycarbonate (PC)<br>Polyetheretherketon (PEEK) | Polycarbonate (PC)<br>Polyetheretherketon (PEEK) |
| pH range                         | 2 – 13          | 2 – 13          | –                                                | –                                                |
| Suitable for solvents            | yes             | yes             | –                                                | –                                                |
| Max. temperature                 | 180 °C          | 180 °C          | 100 °C                                           | 100 °C                                           |
| Sterilization methods            | all methods     | all methods     | yes, autoclavable                                | yes, autoclavable                                |
|                                  | 6               | 7               | 8 D                                              | 9 D                                              |

Disposable Tube

S 18 / 25 – ET50

0003452500

For attaching onto plastic  
tools from S 18 D and S 25  
D series.

Material

PP







T 25 digital

| Dispersing element               | S 25 N – 8 G    | S 25 N – 10 G   | S 25 N – 18 G   | S 25 KV – 18 G        | S 25 NK – 19 G  |
|----------------------------------|-----------------|-----------------|-----------------|-----------------------|-----------------|
| Ident. No.                       | 0001024200      | 0000594000      | 0000593400      | 0002348000            | 0002494700      |
| Working range                    | 1 – 50 ml       | 1 – 100 ml      | 10 – 1500 ml    | 10 – 1500 ml          | 25 – 1500 ml    |
| Stator diameter                  | 8 mm            | 10 mm           | 18 mm           | 18 mm                 | 19 mm           |
| Rotor diameter                   | 6.1 mm          | 7.5 mm          | 12.7 mm         | 12.7 mm               | 12.7 mm         |
| Gap between rotor and stator     | 0.25 mm         | 0.35 mm         | 0.3 mm          | 0.3 mm                | 0.3 mm          |
| Min. / max. immersion depth      | 27 / 85 mm      | 22 / 85 mm      | 40 / 165 mm     | 40 / 225              | 40 / 165 mm     |
| Shaft length                     | 108 mm          | 105 mm          | 194 mm          | 270 mm                | 194 mm          |
| Materials in contact with medium | PTFE, AISI 316L | PTFE, AISI 316L | PTFE, AISI 316L | FFPM / SIC, AISI 316L | PTFE, AISI 316L |
| pH range                         | 2 – 13          | 2 – 13          | 2 – 13          | 2 – 13                | 2 – 13          |
| Suitable for solvents            | yes             | yes             | yes             | yes                   | yes             |
| Max. temperature                 | 180 °C          | 180 °C          | 180 °C          | 220 °C                | 120 °C          |
| Sterilization methods            | all methods     | all methods     | all methods     | wet chemical          | wet chemical    |
| Min. vacuum                      | –               | –               | –               | 1 mbar                | –               |
| Max. pressure                    | –               | –               | –               | 6 bar                 | –               |

10

11

12



T 25 digital

| Dispersing element               | S 25 – KR – 18 G     | S 25 – KR – 25 G     | S 25 – KR – 25 F     |
|----------------------------------|----------------------|----------------------|----------------------|
| Ident. No.                       | 0020002971           | 0020002972           | 0020002975           |
| Working range                    | 10 – 1500 ml         | 50 – 2000 ml         | 100 – 2000 ml        |
| Stator diameter                  | 18 mm                | 25 mm                | 25 mm                |
| Rotor diameter                   | 12.7 mm              | 17 mm                | 18 mm                |
| Gap between rotor and stator     | 0.3 mm               | 0.5 mm               | 0.5 mm               |
| Min. / max. immersion depth      | 40 – 185 mm          | 40 – 185 mm          | 40 – 185 mm          |
| Shaft length                     | 194 mm               | 194 mm               | 194 mm               |
| Materials in contact with medium | FKM, PTFE, AISI 316L | FKM, PTFE, AISI 316L | FKM, PTFE, AISI 316L |
| pH range                         | 2 – 13               | 2 – 13               | 2 – 13               |
| Suitable for solvents            | no                   | no                   | no                   |
| Max. temperature                 | 110 °C               | 110 °C               | 110 °C               |
| Sterilization methods            | wet chemical         | wet chemical         | wet chemical         |
| Min. vacuum                      | 50 mbar              | 50 mbar              | 50 mbar              |

TS 25-3

Cleaning tool for cleaning three dispersing elements. The cleaning tool consists of an aluminum stand, three cleaning tubes (PP) and three covers with openings (PP).

|                |                   |
|----------------|-------------------|
| Material tubes | PP                |
| Material lid   | PP                |
| Material stand | aluminum anodized |
| Ident. No.     | 0020003013        |

Fits the following dispersing elements:

S25N-18G/18G-ST  
S25N-25G/25G-ST  
S25KR-18G/18G-ST  
S25KR-25G/25F/25G-ST  
S25KV-18G/25G/25F



Example of the S 50 N – G 45 M dispersing element set-up



T 25 digital

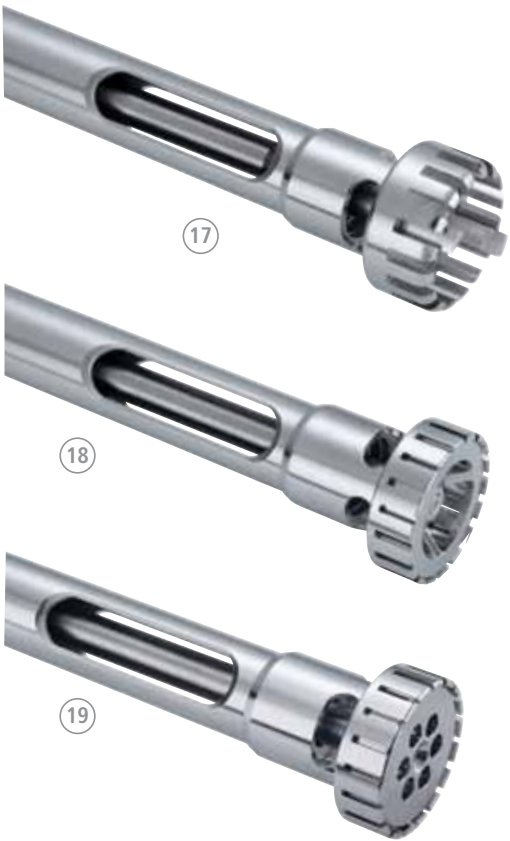
| S 25 N – 25 G   | S 25 KV – 25 G        | S 25 N – 25 F   | S 25 KV – 25 F        | S 25 D – 10 G – KS         | S 25 D – 14 G – KS         |
|-----------------|-----------------------|-----------------|-----------------------|----------------------------|----------------------------|
| 0001713300      | 0002466900            | 0001713800      | 0002404000            | 0003452200                 | 0003452100                 |
| 50 – 2000 ml    | 50 – 2000 ml          | 100 – 2000 ml   | 100 – 2000 ml         | 10 – 100 ml                | 10 – 500 ml                |
| 25 mm           | 25 mm                 | 25 mm           | 25 mm                 | 10 mm                      | 14 mm                      |
| 17 mm           | 17 mm                 | 18 mm           | 18 mm                 | 6.75 mm                    | 9.5 mm                     |
| 0.5 mm          | 0.5 mm                | 0.5 mm          | 0.5 mm                | 0.25 mm                    | 0.35 mm                    |
| 40 / 165 mm     | 40 / 225 mm           | 40 / 165 mm     | 40 / 225 mm           | 15 / 85 mm                 | 15 / 85 mm                 |
| 194 mm          | 270 mm                | 194 mm          | 270 mm                | 150 mm                     | 150 mm                     |
| PTFE, AISI 316L | FFPM / SIC, AISI 316L | PTFE, AISI 316L | FFPM / SIC, AISI 316L | Polycarbonate (PC)         | Polycarbonate (PC)         |
|                 |                       |                 |                       | Polyetheretherketon (PEEK) | Polyetheretherketon (PEEK) |
| 2 – 13          | 2 – 13                | 2 – 13          | 2 – 13                | –                          | –                          |
| yes             | yes                   | yes             | yes                   | –                          | –                          |
| 180 °C          | 220 °C                | 180 °C          | 220 °C                | 100 °C                     | 100 °C                     |
| all methods     | wet chemical          | all methods     | wet chemical          | yes, autoclavable          | yes, autoclavable          |
| –               | 1 mbar                | –               | 1 mbar                | –                          | –                          |
| –               | 6 bar                 | –               | 6 bar                 | –                          | –                          |

13

14

15 D

16 D



T 50 digital

| Dispersing element               | S 50 N – G 45 G | S 50 N – G 45 M | S 50 N – G 45 F |
|----------------------------------|-----------------|-----------------|-----------------|
| Ident. No.                       | 0008003000      | 0008003300      | 0008003900      |
| Working range                    | 0.5 – 20 l      | 0.5 – 15 l      | 0.25 – 10 l     |
| Stator diameter                  | 45 mm           | 45 mm           | 45 mm           |
| Rotor diameter                   | 36 mm           | 40.5 mm         | 40 mm           |
| Gap between rotor and stator     | 0.5 mm          | 0.25 mm         | 0.5 mm          |
| Min. / max. immersion depth      | 70 / 250 mm     | 70 / 250 mm     | 70 / 250 mm     |
| Shaft length                     | 300 mm          | 290 mm          | 290 mm          |
| Materials in contact with medium | PTFE, AISI 316L | PTFE, AISI 316L | PTFE, AISI 316L |
| pH range                         | 2 – 13          | 2 – 13          | 2 – 13          |
| Suitable for solvents            | yes             | yes             | yes             |
| Max. temperature                 | 180 °C          | 180 °C          | 180 °C          |
| Sterilization methods            | all methods     | all methods     | all methods     |

17

18

19



IKA® Original | Dispersing tools



T 50 digital

|                                  | S 50 KG – HH – G 45 G     | S 50 KG – HH – G 45 M     | S 50 KG – HH – G 45 F     |
|----------------------------------|---------------------------|---------------------------|---------------------------|
| Dispersing element               | S 50 KG – HH – G 45 G FDA | S 50 KG – HH – G 45 M FDA | S 50 KG – HH – G 45 F FDA |
| Ident. No.                       | 0008003200                | 0008003500                | 0008004100                |
| Working range                    | 0.5 – 20 l                | 0.5 – 15 l                | 0.25 – 10 l               |
| Stator diameter                  | 45 mm                     | 45 mm                     | 45 mm                     |
| Rotor diameter                   | 36 mm                     | 40.5 mm                   | 40 mm                     |
| Gap between rotor and stator     | 0.5 mm                    | 0.25 mm                   | 0.5 mm                    |
| Min. / max. immersion depth      | 70 / 260 mm               | 70 / 250 mm               | 70 / 250 mm               |
| Shaft length                     | 300 mm                    | 300 mm                    | 290 mm                    |
| Materials in contact with medium | FFPM / SIC, AISI 316L     | FFPM / SIC, AISI 316L     | FFPM / SIC, AISI 316L     |
| pH range                         | 2 – 13                    | 2 – 13                    | 2 – 13                    |
| Suitable for solvents            | yes                       | yes                       | yes                       |
| Max. temperature                 | 180 °C                    | 180 °C                    | 180 °C                    |
| Sterilization methods            | wet chemical              | wet chemical              | wet chemical              |
| Min. vacuum                      | 1 mbar                    | 1 mbar                    | 1 mbar                    |
| Max. pressure                    | 6 bar                     | 6 bar                     | 6 bar                     |

T 65 basic I digital

|                                  | S 65 KG – HH – G 65 G | S 65 KG – HH – G 65 M | S 65 KG – HH – G 65 F |
|----------------------------------|-----------------------|-----------------------|-----------------------|
| Ident. No.                       | 0008005500            | 0008005700            | 0008005900            |
| Working range                    | 2 – 50 l              | 2 – 40 l              | 2 – 30 l              |
| Stator diameter                  | 65 mm                 | 65 mm                 | 65 mm                 |
| Rotor diameter                   | 58 mm                 | 58 mm                 | 58 mm                 |
| Gap between rotor and stator     | 0.5 mm                | 0.5 mm                | 0.5 mm                |
| Min. / max. immersion depth      | 90 / 450 mm           | 80 / 450 mm           | 80 / 450 mm           |
| Shaft length                     | 520 mm                | 510 mm                | 500 mm                |
| Materials in contact with medium | FFPM / SIC, AISI 316L | FFPM / SIC, AISI 316L | FFPM / SIC, AISI 316L |
| pH range                         | 2 – 13                | 2 – 13                | 2 – 13                |
| Suitable for solvents            | yes                   | yes                   | yes                   |
| Max. temperature                 | 180 °C                | 180 °C                | 180 °C                |
| Sterilization methods            | wet chemical          | wet chemical          | wet chemical          |
| Min. vacuum                      | 1 mbar                | 1 mbar                | 1 mbar                |
| Max. pressure                    | 6 bar                 | 6 bar                 | 6 bar                 |

T 50 digital

|                                  | S 50 B – G 45 G   | S 50 B – G 45 M   | S 50 B – G 45 F   | S 50 KR – G 45 G | S 50 KR – G 45 M | S 50 KR – G 45 F |
|----------------------------------|-------------------|-------------------|-------------------|------------------|------------------|------------------|
| Ident. No.                       | 0010000633        | 0010000634        | 0010000635        | 0010000629       | 0010000630       | 0010000631       |
| Working range                    | 0.5 – 20 l        | 0.5 – 15 l        | 0.25 – 10 l       | 0.5 – 20 l       | 0.5 – 15 l       | 0.25 – 10 l      |
| Stator diameter                  | 45 mm             | 45 mm             | 45 mm             | 45 mm            | 45 mm            | 45 mm            |
| Rotor diameter                   | 36 mm             | 40.5 mm           | 40 mm             | 36 mm            | 40.5 mm          | 40 mm            |
| Gap between rotor and stator     | 0.5 mm            | 0.25 mm           | 0.5 mm            | 0.5 mm           | 0.25 mm          | 0.5 mm           |
| Min. / max. immersion depth      | 70 – 250 mm       | 70 – 250 mm       | 70 – 250 mm       | 70 – 260 mm      | 70 – 260 mm      | 70 – 260 mm      |
| Shaft length                     | 300 mm            | 300 mm            | 300 mm            | 300 mm           | 300 mm           | 300 mm           |
| Materials in contact with medium | AISI 316L, bronze | AISI 316L, bronze | AISI 316L, bronze | PTFE, AISI 316L  | PTFE, AISI 316L  | PTFE, AISI 316L  |
| pH range                         | 2 – 13            | 2 – 13            | 2 – 13            | 2 – 13           | 2 – 13           | 2 – 13           |
| Suitable for solvents            | yes               | yes               | yes               | no               | no               | no               |
| Max. temperature                 | 180 °C            | 220 °C            | 180 °C            | 110 °C           | 110 °C           | 110 °C           |
| Sterilization methods            | all methods       | all methods       | all methods       | wet chemical     | wet chemical     | wet chemical     |
| Min. vacuum                      | –                 | –                 | –                 | 100 mbar         | 100 mbar         | 100 mbar         |
| Max. pressure                    | –                 | –                 | –                 | –                | –                | –                |

T 65 basic I digital

|                                  | S 65 KR – G 65 G | S 65 KR – G 65 M | S 65 KR – G 65 F |
|----------------------------------|------------------|------------------|------------------|
| Ident. No.                       | 0010000641       | 0010000642       | 0010000643       |
| Working range                    | 2 – 50 l         | 2 – 40 l         | 2 – 30 l         |
| Stator diameter                  | 65 mm            | 65 mm            | 65 mm            |
| Rotor diameter                   | 53 mm            | 58 mm            | 58 mm            |
| Gap between rotor and stator     | 0.5 mm           | 0.5 mm           | 0.5 mm           |
| Min. / max. immersion depth      | 90 – 450 mm      | 80 – 450 mm      | 80 – 450 mm      |
| Shaft length                     | 520 mm           | 510 mm           | 500 mm           |
| Materials in contact with medium | PTFE, AISI 316L  | PTFE, AISI 316L  | PTFE, AISI 316L  |
| pH range                         | 2 – 13           | 2 – 13           | 2 – 13           |
| Suitable for solvents            | no               | no               | no               |
| Max. temperature                 | 80 °C            | 80 °C            | 80 °C            |
| Sterilization methods            | wet chemical     | wet chemical     | wet chemical     |
| Min. vacuum                      | 100 mbar         | 100 mbar         | 100 mbar         |
| Max. pressure                    | –                | –                | –                |



AVAILABLE 06/2015

AVAILABLE 06/2015



IKA® Original | Special dispersing tools

IKA+

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

T 10 basic

| Dispersing element               | S 10 N – 8 G – ST | S 10 N – 10 G – ST |
|----------------------------------|-------------------|--------------------|
| Ident. No.                       | 0004446500        | 0004446700         |
| 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           | 0.2 mm             |
| Min. / max. immersion depth      | 20 / 95 mm        | 20 / 100 mm        |
| Shaft length                     | 115 mm            | 115 mm             |
| Materials in contact with medium | PTFE, AISI 316L   | PTFE, AISI 316L    |

T 50 digital

| Dispersing element              | R 50 "high speed" stirring shaft | S 50 N – W 65 SK Cutting head | S 50 N – W 80 SMK Jet mixer head |
|---------------------------------|----------------------------------|-------------------------------|----------------------------------|
| Ident. No.                      | 0001689300*                      | 0008005100                    | 0008006300                       |
| Working range                   | 0.25 – 30 l                      | 1 – 10 l                      | 1 – 50 l                         |
| Max. circumferential speed      | 15.7 – 23 m/s                    | –                             | –                                |
| Max. permissible rotor diameter | 50 mm                            | –                             | –                                |
| Material                        | Stainless steel (AISI 316L)      | –                             | –                                |
| Generator diameter              | –                                | 65 mm                         | 80 mm                            |
| Min. / max. immersion depth     | –                                | 80 / 350 mm                   | 140 / 350 mm                     |
| Available seals                 | –                                | S 50 N                        | S 50 N                           |

\* Included with delivery:  
R 1402 Dissolver  
Ident. No. 0001243300

T 25 basic

| S 25 N – 8 G – ST | S 25 N – 10 G – ST | S 25 N – 18 G – ST | S 25 N – 25 G – ST | S 25 – KR – 18 G – ST | S 25 – KR – 25 G – ST |
|-------------------|--------------------|--------------------|--------------------|-----------------------|-----------------------|
| 0004446900        | 0004447100         | 0004447300         | 0004447500         | 0020002973            | 0020002974            |
| 1 – 50 ml         | 1 – 100 ml         | 10 – 1500 ml       | 50 – 2000 ml       | 10 – 1500 ml          | 50 – 2000 ml          |
| 8 mm              | 10 mm              | 18 mm              | 25 mm              | 18 mm                 | 25 mm                 |
| 6.1 mm            | 7.5 mm             | 12.7 mm            | 17 mm              | 13.4 mm               | 20 mm                 |
| 0.25 mm           | 0.35 mm            | 0.3 mm             | 0.5 mm             | 0.25 mm               | 0.5 mm                |
| 27 / 85 mm        | 22 / 85 mm         | 40 / 165 mm        | 40 / 165 mm        | 40 – 185 mm           | 40 – 185 mm           |
| 108 mm            | 105 mm             | 194 mm             | 194 mm             | 194 mm                | 194 mm                |
| PTFE, AISI 316L   | PTFE, AISI 316L    | PTFE, AISI 316L    | PTFE, AISI 316L    | FKM, PTFE, AISI 316L  | FKM, PTFE, AISI 316L  |

T 50 digital

| Dispersing element               | S 50 N – G 45 G – ST | S 50 B – G 45 G – ST | S 50 KR – G 45 G – ST | S 50 KG - HH - G 45 G - ST<br>S 50 KG - HH - G 45 G - ST, FDA |
|----------------------------------|----------------------|----------------------|-----------------------|---------------------------------------------------------------|
| Ident. No.                       | 0008039500           | 0010000636           | 0010000632            | 0010000648   0010000640                                       |
| Working range                    | 0.5 – 20 l           | 0.5 – 15 l           | 0.5 – 20 l            | 0.5 – 20 l                                                    |
| Stator diameter                  | 45 mm                | 45 mm                | 45 mm                 | 45 mm                                                         |
| Rotor diameter                   | 36 mm                | 38 mm                | 38 mm                 | 38 mm                                                         |
| Gap between rotor and stator     | 0.5 mm               | 0.5 mm               | 0.5 mm                | 0.5 mm                                                        |
| Min. / max. immersion depth      | 70 / 250 mm          | 70 – 250 mm          | 70 – 260 mm           | 70 – 260 mm                                                   |
| Shaft length                     | 300 mm               | 300 mm               | 300 mm                | 300 mm                                                        |
| Materials in contact with medium | PTFE, AISI 316L      | AISI 316L, bronze    | PTFE, AISI 316L       | PTFE, AISI 316L                                               |
| pH range                         | –                    | 2 – 13               | 2 – 13                | 2 – 13                                                        |
| Suitable for solvents            | –                    | yes                  | no                    | no                                                            |
| Max. temperature                 | –                    | 180 °C               | 110 °C                | 110 °C                                                        |
| Sterilization methods            | –                    | all methods          | wet chemical          | wet chemical                                                  |

Silentstream

The flow breaker is used to prevent vortexing and to minimize air induction into the medium.

Ident. No. 0003754000

Fits the following dispersing elements:

|              |              |
|--------------|--------------|
| S 25 N-18 G  | S 25 KV-18 G |
| S 25 N-25 G  | S 25 KV-25 G |
| S 25 N-25 F  | S 25 KV-25 F |
| S 25 NK-19 G | S 18 N-19 G  |

AVAILABLE 06/2015



# UTTD | ULTRA-TURRAX® Tube Drive control



Watch the video now:  
[www.ika.com/video](http://www.ika.com/video)



Cross-contamination free  
No cleaning required  
Reproducible test results



**Turbo function** for short time intensive mixing, homogenizing or grinding



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



**Reverse rotation switch** to optimize mixing and crushing performance



**USB interface** to control and document all the parameters using labworldsoft® software and for updating your firmware



**Multilingual OLED display** for simple and precise menu navigation



**ULTRA-TURRAX® Tube Drive control**



reddot design award  
winner 2012



|                               | UTTD<br>ULTRA-TURRAX®<br>Tube Drive | UTTD<br>ULTRA-TURRAX®<br>Tube Drive control |
|-------------------------------|-------------------------------------|---------------------------------------------|
| <b>Technical data</b>         |                                     |                                             |
| Motor rating input / output   | 20 / 17 W                           | 20 / 17 W                                   |
| Speed range / Turbo speed     | 300 – 6000 rpm / –                  | 400 – 6000 rpm / 8000 rpm                   |
| Display / Speed display       | LED (timer) / scale                 | OLED / digital                              |
| Timer                         | 1 s – 29 min                        | 10 s – 30 min<br>(infinitely adjustable)    |
| Reverse rotation interval     | –                                   | 10 – 60 s                                   |
| Dimensions (W x D x H)        | 100 x 40 x 160 mm                   | 122 x 178 x 48 mm                           |
| Weight                        | 0.75 kg                             | 1.0 kg                                      |
| Protection class DIN EN 60529 | IP 20                               | IP 20                                       |
| Interface                     | yes                                 | yes                                         |
| Voltage                       | 100 – 240 V                         | 100 – 240 V                                 |
| Frequency                     | 50/60 Hz                            | 50/60 Hz                                    |
|                               | Ident. No. 0003646000               | Ident. No. 0004135300                       |

## Included with delivery

|                                                                            |                       |                       |
|----------------------------------------------------------------------------|-----------------------|-----------------------|
| ULTRA-TURRAX® Tube Drive control                                           | 1                     | 1                     |
| ST-20 Tube with stirring device                                            | 2                     | 1                     |
| DT-20 Tube with rotor-stator element                                       | 2                     | 1                     |
| BMT-20 G / S Tube for grinding with glass (G) or stainless steel balls (S) | 2                     | 2                     |
| Removal hook for removal of rotor-stator                                   | 1                     | 1                     |
| Power supply                                                               | 1                     | 1                     |
|                                                                            | Ident. No. 0003645000 | Ident. No. 0003827500 |

# Accessories | IKA® Tubes

## ST Tube with stirring devices

|                            | Ident. No. |
|----------------------------|------------|
| ST-20 (pack of 25)         | 0003703000 |
| ST-20-M-gamma (pack of 20) | 0003700500 |
| ST-50 (pack of 10)         | 0003699500 |
| ST-50-M (pack of 10)       | 0003629500 |
| ST-50-M-gamma (pack of 10) | 0003701500 |

## DT Tube with rotor-stator element

|                             | Ident. No. |
|-----------------------------|------------|
| DT-20 (pack of 25)*         | 0003703100 |
| DT-20-M-gamma (pack of 20)* | 0003700600 |
| DT-20 eco (pack of 25)**    | 0020003207 |
| DT-50 (pack of 10)*         | 0003699600 |
| DT-50-M (pack of 10)*       | 0003629600 |
| DT-50-M-gamma (pack of 10)* | 0003701600 |
| DT-50 eco (pack of 10)**    | 0020003213 |

\* Rotor-stator element made with PEEK

\*\* Rotor-stator element made with PSU

## BMT-S/G Tube for grinding with stainless steel (S) or glass (G) balls

|                               | Ident. No. |
|-------------------------------|------------|
| BMT-20-S (pack of 25)         | 0003703200 |
| BMT-20-G (pack of 25)         | 0003703300 |
| BMT-20-S-M-gamma (pack of 20) | 0003700700 |
| BMT-50-S (pack of 10)         | 0003699700 |
| BMT-50-G (pack of 10)         | 0003699800 |
| BMT-50-S-M (pack of 10)       | 0003629700 |
| BMT-50-G-M (pack of 10)       | 0003629800 |
| BMT-50-S-M-gamma (pack of 10) | 0003701700 |

## Cover for BMT tube

|                                                             | Ident. No. |
|-------------------------------------------------------------|------------|
| TC-50; for 50 ml tubes (10 pcs.)                            | 0003749800 |
| TC-20-M; with pierceable membrane for 20 ml tubes (25 pcs.) | 0003749900 |
| TC-50-M; with pierceable membrane for 50 ml tubes (10 pcs.) | 0003750000 |

## Balls for BMT tube

|                                      | Ident. No. |
|--------------------------------------|------------|
| Glass balls Ø 6 mm (250 g)           | 0003599200 |
| Stainless steel balls Ø 5 mm (250 g) | 0003599300 |



# UTTD | ULTRA-TURRAX® Tube Drive control

# Accessories | IKA® Tubes

Tube lid

Rotor

Stator

Rotor drive

Pestle

Membrane

Membrane fixation

Vessel

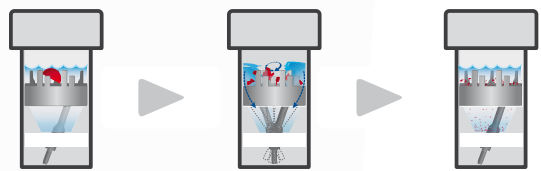
1

liquid + powder



2

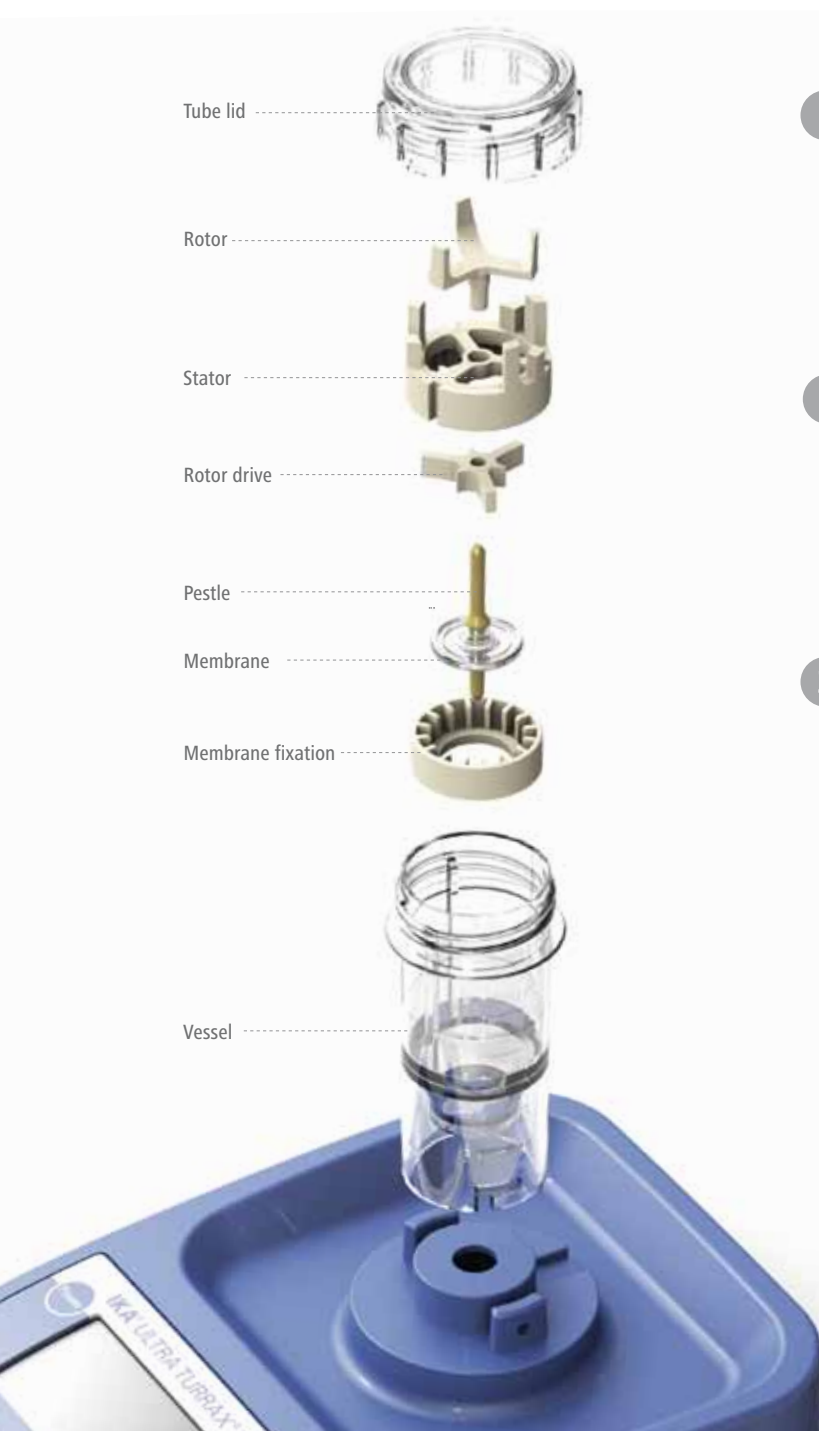
liquid + sample



3

balls + sample













UTTD is ideal for preparing samples in an easier, faster, simpler and safer method.

IKA+

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 DISPAX-REACTOR® DR

2



Module MK/MKO  
(Colloid Mill/Cone Mill)

3



Module MHD  
(mixing, homogenizing, dispersing)

4



Module CMS



magic LAB® with module UTL



magic LAB® with module CMS and accessories  
> for powder/granule incorporation into liquids in recirculation mode



magic LAB® with module Micro-Plant 1 I  
> with exchangeable modules (UTL/DR/MK/MKO)



magic LAB® with module Micro-Plant 2 I  
> with exchangeable modules (UTL/DR/MK/MKO)



magic LAB® with module UTC  
> for dispersing/mixing in a batch operation

Technical data

|                                             |                                            |
|---------------------------------------------|--------------------------------------------|
| Motor power                                 | 900 W                                      |
| Speed range (40 m/s)                        | 3000 – 26,000 rpm                          |
| Operating voltage                           | 220 – 240 V                                |
| Frequency                                   | 50 – 60 Hz                                 |
| Process pressure                            | up to 2.5 bar                              |
| Product temperature in continuous operation | up to 80° C                                |
| In short time operation (up to 18 min/h)    | up to 120° C                               |
| Materials in contact with the medium        | Stainless steel (AISI 316L and AISI 316Ti) |
| Sealing material                            | PTFE-compound                              |
| Shaft sealing ring                          | Standard FPM                               |
| Elastomers in the working chamber           | optional EPDM (FDA), FFPM                  |
| Dimensions (W x D x H)                      | 170 x 270 x 215 mm                         |

magic LAB®

Ident. No. 000U078310

IKA® +



Multifunction storage and transportation box

magic LAB®

- > 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

# Industries & Applications

# FAQ

> Food

- food paste
- fruit juice concentrate
- orange peel
- vegetables
- cheese
- pork meat
- salami
- spices
- peanuts



> Chemistry

- oil
- fuel oil
- crude oil
- waste water
- calcium carbonate
- polymer solution
- dishwasher tabs
- surfactant
- manganese dioxide

> Building material

- ceramic glaze
- wood
- clay powder
- loam
- glass fiber
- engobe powder
- bentonite
- wall paint
- iron mica

> Environment

- soil samples
- compost
- algae
- roots
- resin
- disposal waste
- biogas mud
- plant leaves
- animal excrements



> Medicine & Pharmacy

- Medicine analeptic
- capsules
- tablets
- acetate
- muscle tissue
- collagen granules
- pills
- beta carotin
- calcium phosphate



> Cosmetics

- ointments
- baby cream
- body lotion
- collagen
- flavors
- carnival make-up
- day cream
- showering gel
- shaving gel



**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?**

Those 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.

**The ULTRA-TURRAX® dispersing elements should not run dry. Does that mean that the bottom bore hole has to be in the medium?**

Yes, the circulation hole should be in the medium on all accounts. This is the only way to guarantee the optimum cooling effect on the bearing.

**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.



**Application Support!**

For questions regarding applications and processes, you can call our hotline number:  
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