

# IKA®

## Dispersers



**designed**  
to work perfectly

# Dispersers | From Invention to Innovation

## 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.



 **reddot design award**  
winner 2012

 **reddot design award**  
winner 2012

**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.



**Patented**



 **reddot design award**  
winner 2012

**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 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.



- 1 Plate stands**
    - R 1825 560 mm
    - R 1826 800 mm
    - R 1827 1000 mm
- With 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



T 10 basic

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 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



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



reddot design award  
winner 2012



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



T 50 digital

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

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

Dispersing tools are not included  
in delivery

Dispersing tools are not included  
in delivery

# 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.

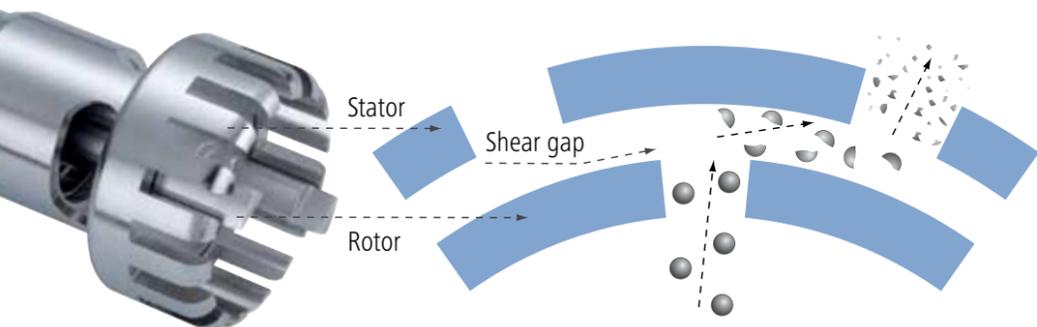
**IKA+ Special accessories!**

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

For dispersing instrument	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	—	8 / 10 / 18 / 19 / 25	G / F
T 50 digital	S / R 50	N	G / W	45 / 65 / 80	G / M / F
T 65 basic	S 65	KG – HH	G	65	G / M / F
T 65 digital	S 65	KG – HH	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

\*\*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

Volume Range Liter	10 ml	50 ml	100 ml	500 ml	2 l	10 l	20 l	50 l	Vacuum operation	Circumferential speed (m/s)	Ultimate fineness, suspensions (µm)	Ultimate fineness, emulsions (µm)
S 10 N – 5 G	■								No	6.0	5 – 25	1 – 10
S 10 N – 8 G	■	■							No	9.6	5 – 25	1 – 10
<b>A</b> 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
S 18 N – 10 G	■	■	■						No	9.8	10 – 50	1 – 10
<b>B</b> 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
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
<b>C</b> S 25 N – 25 G	■	■	■	■	■				No	22.3	15 – 50	1 – 10
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
S 50 N – G 45 G					■				No	18.8	40 – 100	10 – 30
<b>D</b> S 50 N – G 45 M					■	■			No	21.2	25 – 50	5 – 20
S 50 N – G 45 F					■	■			No	20.9	10 – 30	1 – 10
S 65 KG – HH – G 65 G							■		Yes	21.9 (28.8: T 65 digital)	25 – 75	5 – 25
<b>E</b> 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

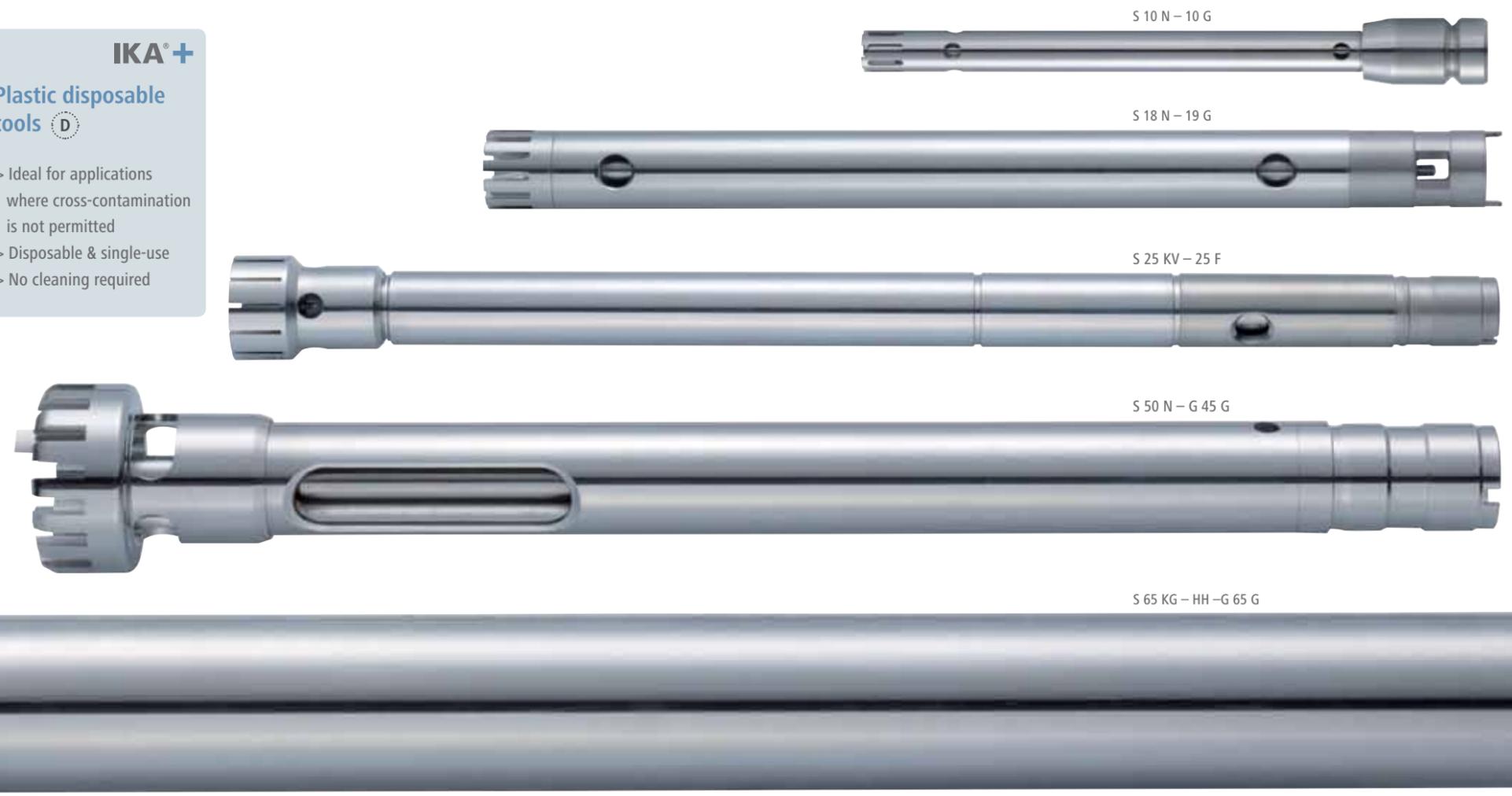


# IKA® Original | Dispersing tools



## Plastic disposable tools D

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



### T 10 basic

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	0003433225	0003433325
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) Polysulfon (PSU)	Polycarbonate (PC) 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.	000L004639	000L004640	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) Polyetheretherketon (PEEK)	Polycarbonate (PC) 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

# IKA® Original | Dispersing tools



## 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

12

12

## 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

13

14

15



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	–	–

16

17

18

D

19

D

## T 65 basic I digital

Dispersing element	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

20

21

22



# 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

1

### T 25 digital

Dispersing element	S 25 N – 8 G – ST	S 25 N – 10 G – ST	S 25 N – 18 G – ST	S 25 N – 25 G – ST
Ident. No.	0004446900	0004447100	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	0.35 mm	0.3 mm	0.5 mm
Min. / max. immersion depth	27 / 85 mm	22 / 85 mm	40 / 165 mm	40 / 165 mm
Shaft length	108 mm	105 mm	194 mm	194 mm
Materials in contact with medium	PTFE, AISI 316L	PTFE, AISI 316L	PTFE, AISI 316L	PTFE, AISI 316L

2

3

### T 50 digital

Dispersing element	R 50 "high speed" stirring shaft	Dispersing element	S 50 N – G 45 G – ST
Ident. No.	0001689300	Ident. No.	0008039500
Working range	0.25 – 30 l	Working range	0.5 – 20 l
Max. circumferential speed	15.7 – 23 m/s	Stator diameter	45 mm
Max. permissible rotor diameter	50 mm	Rotor diameter	36 mm
Material	Stainless steel (AISI 316L)	Gap between rotor and stator	0.5 mm
	<b>* Included with delivery: R 1402</b>	Min. / max. immersion depth	70 / 250 mm
	<b>Dissolver Ident. No. 0001243300</b>	Shaft length	300 mm
		Materials in contact with medium	PTFE, AISI 316L

4

5

### T 50 digital

Dispersing element	S 50 N – W 65 SK Cutting head	S 50 N – W 80 SMK Jet mixer head
Ident. No.	0008005100	0008006300
Working range	1 – 10 l	1 – 50 l
Generator diameter	65 mm	80 mm
Min. / max. immersion depth	80 / 350 mm	140 / 350 mm
Available seals	S 50 N	S 50 N

6

7

### 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

8

# UTTD | ULTRA-TURRAX® Tube Drive control

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.



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



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



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



**Rotating knob** to vary the speed and the **pressing knob** for start/stop operation



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



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

### Technical data

Motor rating input / output	20 / 17 W
Speed range / Turbo speed	400 – 6000 rpm / 8000 rpm
Display	OLED
Speed display	digital
Timer	10 s – 30 min (infinitely adjustable)
Reverse rotation interval	10 – 60 s
Dimensions (W x D x H)	122 x 178 x 48 mm
Weight	1.0 kg
Protection class DIN EN 60529	IP 20
Interface	yes
Voltage	100 – 240 V
Frequency	50/60 Hz

### ULTRA-TURRAX® Tube Drive control

Ident. No. 0004135300



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

# Accessories | IKA® Tubes



### ST Tube with stirring device

Suitable for:  
> Mixing  
> Stirring  
> Extractions  
> Preparation of soil sample suspensions

	Ident. No.
ST-20	0003703000
ST-20-M gamma	0003700500
ST-50	0003699500
ST-50-M	0003629500
ST-50-M gamma	0003701500



### DT Tube with rotor-stator element

Suitable for:  
> Dispersion  
> Homogenization  
> Suspensions  
> Pharmacokinetics  
> Metabolism studies

	Ident. No.
DT-20	0003703100
DT-20-M gamma	0003700600
DT-50	0003699600
DT-50-M	0003629600
DT-50-M gamma	0003701600



### BMT G/S 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

	Ident. No.
BMT-20-S	0003703200
BMT-20-S-M gamma	0003700700
BMT-20-G	0003703300
BMT-50-S	0003699700
BMT-50-S-M	0003629700
BMT-50-S-M gamma	0003701700
BMT-50-G	0003699800
BMT-50-G-M	0003629800

### Covers

	Ident. No.
TC-50 (10 pieces)	0003749800
TC-20-M (25 pieces)	0003749900
TC-50-M (10 pieces)	0003750000

### Balls

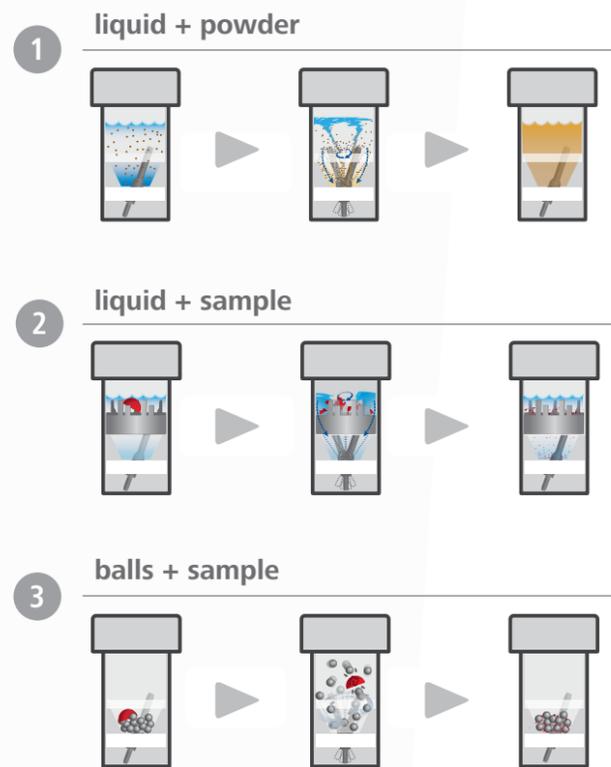
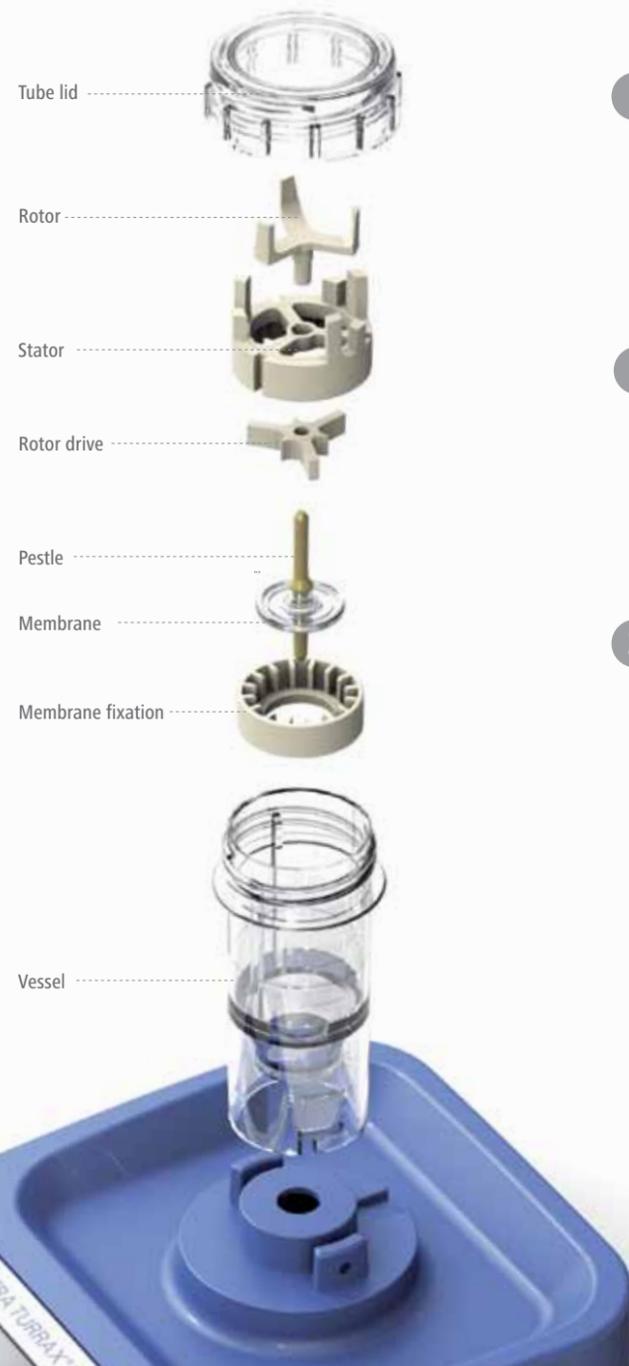
	Ident. No.
Glass balls Ø 6 mm (250 g)	0003599200
Stainless steel balls Ø 5 mm (250 g)	0003599300



All tubes are also available with a pierceable membrane and gamma-sterilized

# UTTD | ULTRA-TURRAX® Tube Drive control

# Accessories | IKA® Tubes



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**

magic LAB®	
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

Ident. No. 000U078310



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

**labworldsoft®**

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.



**Comprehensive Worldwide Service!**

Our dedicated team of engineers provides comprehensive worldwide technical service. Please feel free to contact your dealers or IKA® directly in case of any service queries. Hotline: In the event of an equipment malfunction or technical questions regarding devices and spare parts: call 00 8000 4524357 (00 8000 IKAHELP)



**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.



**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: **00 8000 4522777 (00 8000 IKAAPPS)\***  
 E-Mail: [applicationsupport@ika.de](mailto:applicationsupport@ika.de)

\* Monday – Thursday from 8:30 - 16:30  
 Friday from 8:30 - 15:30

Subject to technical changes  
Indications not binding for delivery

**IKA®+**

**Ordering made easy!**

For more information about  
our products and to place  
your order, please visit:

[www.ika.com](http://www.ika.com)

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