

IKA®

Dispersers



German technology
made in the USA

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 (H₂O) and come equipped with a digital display. These dispersers offer a wide speed range up to 30,000 rpm that enables users to work at high circumferential speeds even with small rotor diameters. The high-performance drive ensures immense speed stability. Due to their broad spectrum of dispersing tools, IKA® dispersers are highly effective for a variety of uses.

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

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



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



3 Year warranty*

* 2+1 years after registering at 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

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 mm
 With slip resistant foil.

Ident. No.			Price
3160000	R 1825	560 mm	\$ 161
3160100	R 1826	800 mm	\$ 183
3160200	R 1827	1000 mm	\$ 190



- 2** R 182 Boss head clamp

Ident. No.	Price
2657700	\$ 31



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

Ident. No.	Price
0593400	\$ 1,507

IKA+

To get customized and additional accessories, please visit 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 ₂ 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	115 V
Frequency	50/60 Hz

Price \$ 1,341

Ident. No. 3737001



T 18 digital

Motor rating input / output	500 / 300 W
Volume range (H ₂ 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	100 – 120 V
Frequency	50/60 Hz

Price \$ 1,152

Ident. No. 3720001



T 25 digital

Motor rating input / output	800 / 500 W
Volume range (H ₂ 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	100 – 120 V
Frequency	50/60 Hz

Price \$ 1,746

Ident. No. 3725001



T 50 digital

Technical data	
Motor rating input / output	1100 / 700 W
Volume range (H ₂ 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	100 – 120 V
Frequency	50/60 Hz

Price \$ 3,092

Ident. No. 3787001



T 65 basic

Motor rating input / output	1800 / 1500 W
Volume range (H ₂ 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 / 3 x 230 V
Frequency	50 Hz

Price \$ 5,769

Ident. No. 4023501



T 65 digital

Motor rating input / output	2600 / 2200 W
Volume range (H ₂ 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 / 3 x 230 V
Frequency	50/60 Hz

Price \$ 7,713

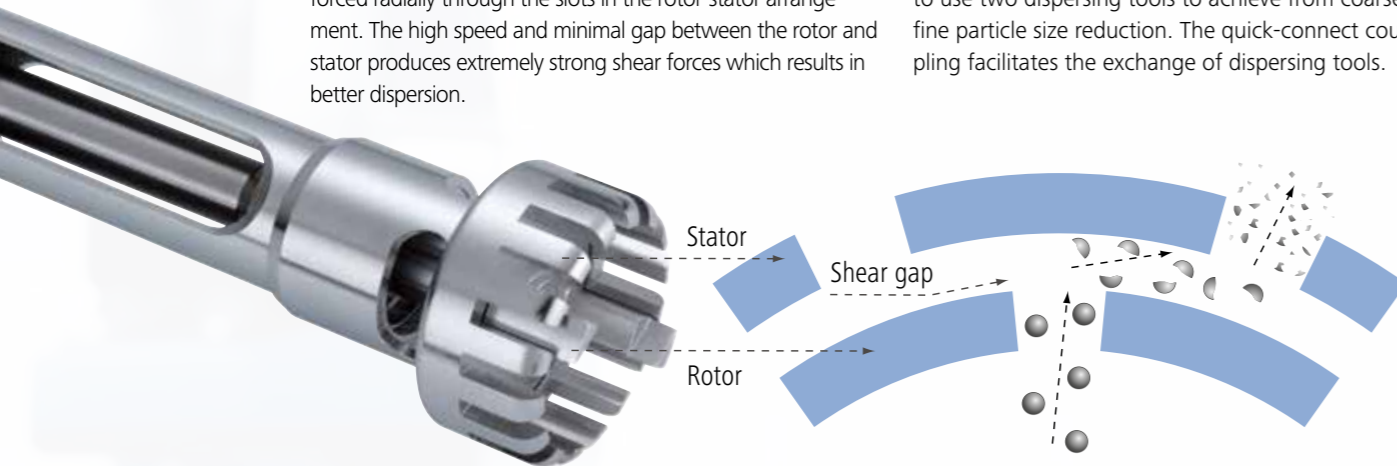
Ident. No. 4234501

Dispersing tools are not included in delivery

Dispersing tools are not included in delivery

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.



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

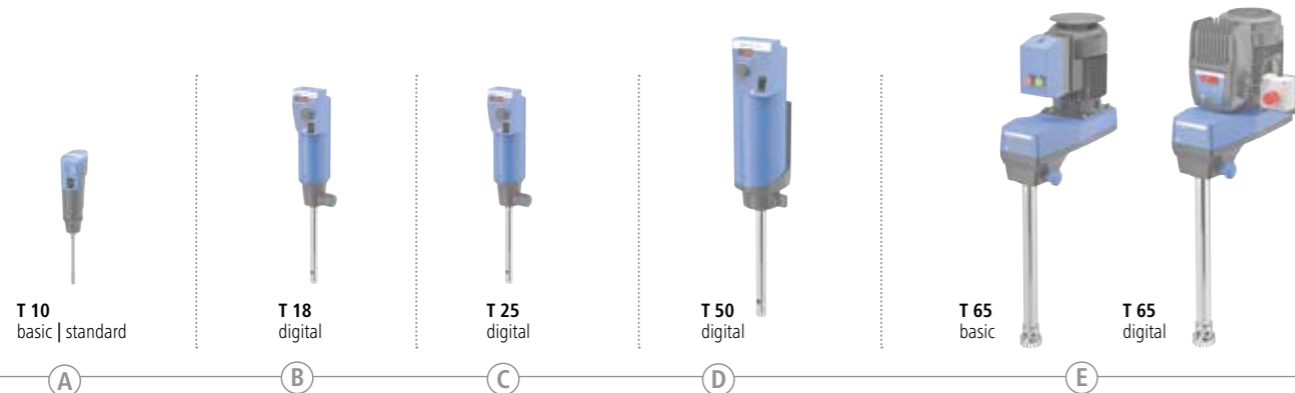
*N = PTFE bearing
 KV = Ball bearing with vacuum-tight sliding-ring seal with silicon carbide seal rings
 NK = PTFE bearing with additional ball bearing without seal
 KG – HH = Ball bearing with sliding-ring seals of hard metal allow with FFPM seals rings
 B = Bronze bearing

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

KR = Ball bearing with FKM or FFPM seal

IKA+ Special accessories!

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



Volume Range Liter	Volume Range								Vacuum operation	Circumferential speed (m/s)	Ultimate fineness, suspensions (µm)	Ultimate fineness, emulsions (µm)
	10 ml	50 ml	100 ml	500 ml	2 l	10 l	20 l	50 l				
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
	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
D	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
	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
E	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
	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
S 65 KR - 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



Disposable Tube

S 18 / 25 – ET50
 For attaching onto plastic tools from S 18 D and S 25 D series.

Material: PP

Price: \$ 18



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.	3304000	3305500	3370100	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) 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
Price	\$ 1,718	\$ 1,597	\$ 1,597	\$ 711	\$ 833
	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	3452400	3452300
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
Price	\$ 1,288	\$ 1,288	\$ 688	\$ 688
	6	7	8 D	9 D

IKA® Original | Dispersing tools



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

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.	1024200	0594000	0593400	2348000	2494700
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	–
Price	\$ 1,382	\$ 1,507	\$ 1,507	\$ 1,870	\$ 1,367

10

11

12

T 25 digital

Dispersing element	S 25 – KD – 18 G	S 25 – KD – 25 G	S 25 – KD – 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
Price	On request	On request	On request

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

Price On request

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
1713300	2466900	1713800	2404000	3452200	3452100
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) Polyetheretherketon (PEEK)	Polycarbonate (PC) 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	–	–
\$ 1,759	\$ 2,099	\$ 1,709	\$ 2,054	\$ 660	\$ 660

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.	8003000	8003300	8003900
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
Price	\$ 3,477	\$ 4,109	\$ 4,085

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.	8003200	8003500	8004100
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
Price	\$ 9,963	\$ 10,615	\$ 10,645
	On request	On request	On request

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
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.	8005500	8005700	8005900
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
Price	\$ 3,183	\$ 3,284	\$ 3,455

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
0010000633	0010000634	0010000635	0010000629	0010000630	0010000631
0.5 – 20 l	0.5 – 15 l	0.25 – 10 l	0.5 – 20 l	0.5 – 15 l	0.25 – 10 l
45 mm	45 mm	45 mm	45 mm	45 mm	45 mm
36 mm	40.5 mm	40 mm	36 mm	40.5 mm	40 mm
0.5 mm	0.25 mm	0.5 mm	0.5 mm	0.25 mm	0.5 mm
70 – 250 mm	70 – 250 mm	70 – 250 mm	70 – 260 mm	70 – 260 mm	70 – 260 mm
300 mm	300 mm	300 mm	300 mm	300 mm	300 mm
AISI 316L, bronze	AISI 316L, bronze	AISI 316L, bronze	PTFE, AISI 316L	PTFE, AISI 316L	PTFE, AISI 316L
2 – 13	2 – 13	2 – 13	2 – 13	2 – 13	2 – 13
yes	yes	yes	no	no	no
180 °C	220 °C	180 °C	110 °C	110 °C	110 °C
all methods	all methods	all methods	wet chemical	wet chemical	wet chemical
–	–	–	100 mbar	100 mbar	100 mbar
–	–	–	–	–	–
On request	On request	On request	On request	On request	On request

T 65 basic I digital

Dispersing element	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	–	–	–
Price	On request	On request	On request



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



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

T 10 basic

Dispersing element	S 10 N – 8 G – ST	S 10 N – 10 G – ST
Ident. No.	4446500	4446700
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
Price	\$ 1,705	\$ 1,705

①

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
4446900	4447100	4447300	4447500	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
\$ 1,390	\$ 1,390	\$ 1,782	\$ 1,848	On request	On request

②

③

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.	1689300*	8005100	8006300
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
Price	\$ 3,364	\$ 4,837	\$ 4,886

④

⑤

⑥

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

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 S 50 KG - HH - G 45 G - ST, FDA
Ident. No.	8039500	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
Price	\$ 3,352	On request	On request	On request On request



UTTD | ULTRA-TURRAX® Tube Drive control



Watch the video now:
www.ika.com/video



Turbo function for short time intensive mixing, homogenizing or grinding



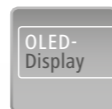
Built-in program library for tests to be repeated under identical conditions



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



Cross-contamination free
No cleaning required
Reproducible test results

	UTTD ULTRA-TURRAX® Tube Drive	UTTD ULTRA-TURRAX® Tube Drive control
Technical data		
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 (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
Price	\$ 860	\$ 1,064
	Ident. No. 3646000	Ident. No. 4135300

	UTTD Workstation	UTTD control Workstation
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
Price	\$ 977	\$ 1,210
	Ident. No. 3645000	Ident. No. 3827500

Accessories | IKA® Tubes

ST Tube with stirring devices

	Ident. No.	Price
ST-20 (pack of 25)	3703000	\$ 250
ST-20-M-gamma (pack of 20)	3700500	\$ 341
ST-50 (pack of 10)	3699500	\$ 130
ST-50-M (pack of 10)	3629500	\$ 130
ST-50-M-gamma (pack of 10)	3701500	\$ 290



DT Tube with rotor-stator element

	Ident. No.	Price
DT-20 (pack of 25)*	3703100	\$ 250
DT-20-M-gamma (pack of 20)*	3700600	\$ 341
DT-20 eco (pack of 25)**	0020003207	\$ 230
DT-50 (pack of 10)*	3699600	\$ 130
DT-50-M (pack of 10)*	3629600	\$ 130
DT-50-M-gamma (pack of 10)*	3701600	\$ 290
DT-50 eco (pack of 10)**	0020003213	\$ 110



* 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.	Price
BMT-20-S (pack of 25)	3703200	\$ 250
BMT-20-G (pack of 25)	3703300	\$ 250
BMT-20-S-M-gamma (pack of 20)	3700700	\$ 341
BMT-50-S (pack of 10)	3699700	\$ 130
BMT-50-G (pack of 10)	3699800	\$ 130
BMT-50-S-M (pack of 10)	3629700	\$ 130
BMT-50-G-M (pack of 10)	3629800	\$ 130
BMT-50-S-M-gamma (pack of 10)	3701700	\$ 290



Cover for BMT tube

	Ident. No.	Price
TC-50; for 50 ml tubes (10 pcs.)	3749800	\$ 106
TC-20-M; with pierceable membrane for 20 ml tubes (25 pcs.)	3749900	\$ 106
TC-50-M; with pierceable membrane for 50 ml tubes (10 pcs.)	3750000	\$ 106

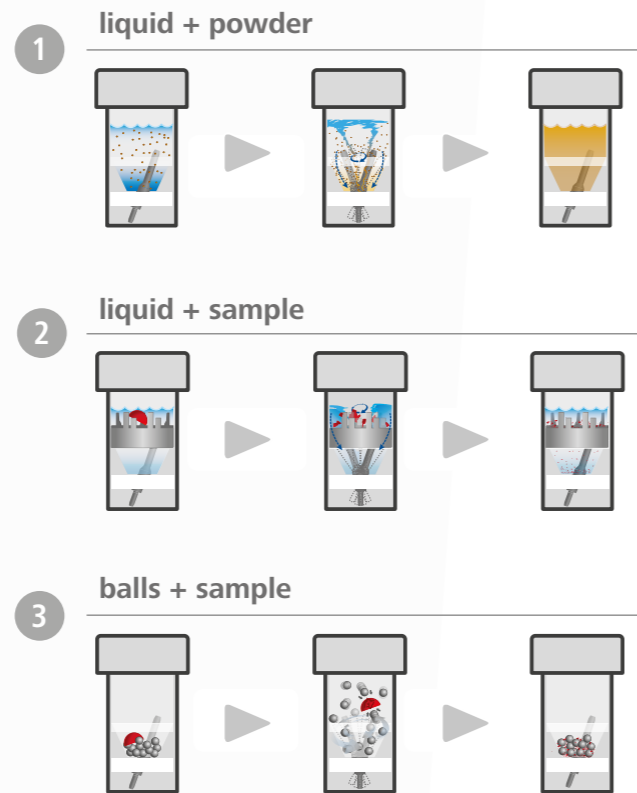
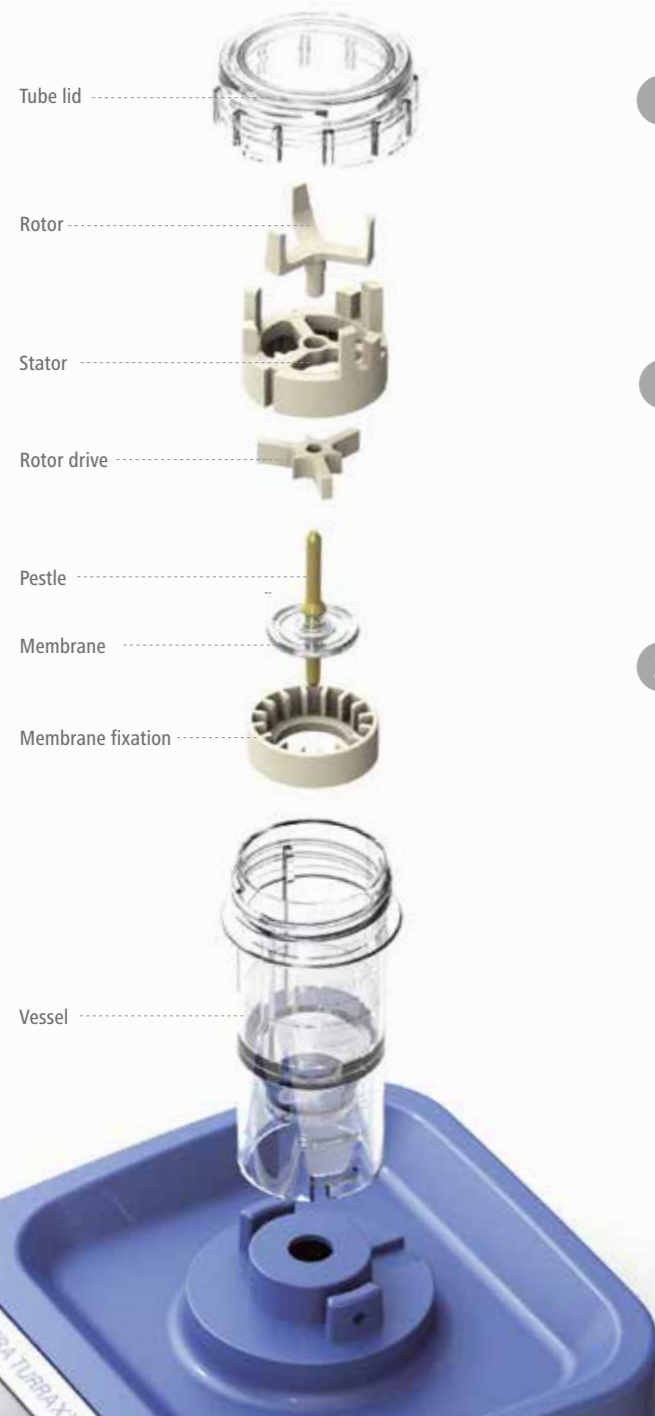


Balls for BMT tube

	Ident. No.	Price
Glass balls Ø 6 mm (250 g)	3599200	\$ 117
Stainless steel balls Ø 5 mm (250 g)	3599300	\$ 117

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

Price

\$ 12,070

Ident. No. U078310



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

> 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



FAQ

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: **+1 800 733-3037***
E-Mail: sales@ika.net or visit our website at www.ika.com/applicationsupport

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Application
Support

Worldwide
service
network

Customizing
Center

Modern manufacturing

During manufacturing, IKA® focuses on high quality, not only with well-trained and experienced personnel, but also with standardized processes and quality checks.

The assembly of the printed circuit boards is fully automated and includes an automated 100% quality control check of every PCB.



Customizing Center

It is important that IKA products work for your application. We are introducing a new program: product solutions tailored to your needs.

Should you not find the appropriate device in our standard product range, please send us your requested specifications through the online form. Our team will determine its feasibility and offer a solution to you.

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Our Application Center spans 400sqm 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 processes that involve stirring, shaking, dispersing, grinding, heating, analyzing and distilling.

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to work perfectly

