

# **Shakers**



# 3D Shakers | World in motion!

For over a century, IKA® has been leading the way with innovative technologies and applications in the field of laboratory, analytical and process equipment.

In 1925, IKA® first produced the conventional shaker and displayed this entire product line at ACHEMA. To give our loyal customers a leading edge, IKA® has ensured that new product innovation has been introduced time and time again. And once again, IKA® has completely revamped its' shaker line by incorporating advanced technology with unique designs. As always, we continue our 100 year old tradition of bringing design, innovation, ease of use and commitment to our customers!

IKA® already has a line of well known and proven orbital and horizontal shakers. IKA® is proud to introduce a brand new series of Rollers, Rockers and Overhead Rotators. The wide range of Rocking, Rolling, Rotating and Shaking covers the entire spectrum of motions in mixing technology. All new devices are available in a basic and digital version. IKA® has also added a sibling to its' voluminous incubator shaker KS 4000 i control and ic control. The expanded product range facilitates the use of our equipment in a wider range of applications, especially in the medical and biological field. The hallmark of IKA®, exceptional design, innovation, quality, high efficiency, smooth operation and excellent performance continues as it has for 100 years!

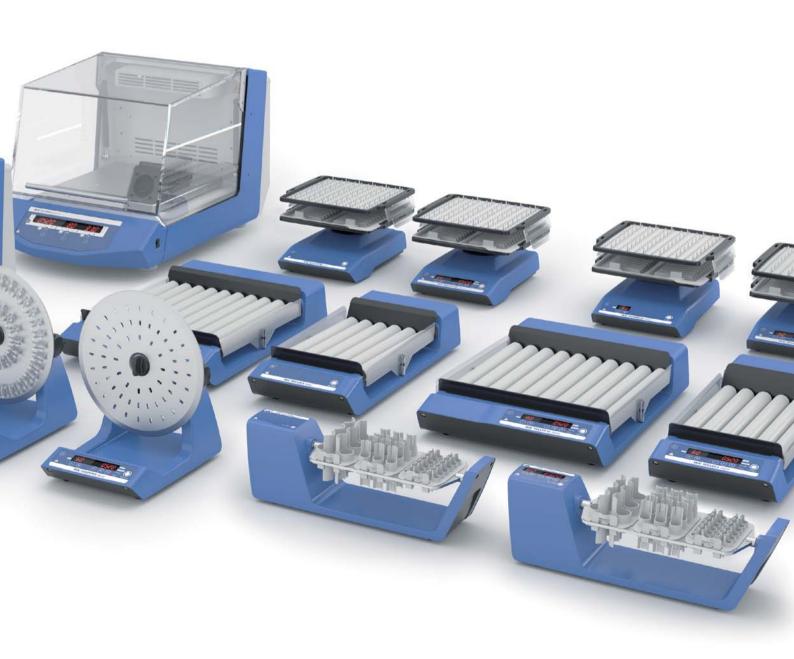




\* 2+1 years after registering at www.ika.com/register, glassware and wearing parts excluded

Protection class according to DIN EN 60529: IP 21





# 2D & 3D Rockers | Enhanced dimensions, Smaller footprints!



The brand new range of 2D and 3D Rockers provide gentle rocking/ see-saw action and are used for homogenous mixing in flasks, culture flasks, Petri dishes and tubes. The compact, small footprint and dual platform saves valuable bench space and facilitates easy-handling. Even with load and voltage fluctuations, shaking speeds remain constant. Precision in speed (available in fixed and variable) and adjustable tilt angle allow for a variety of applications.





# Rollers | Smart and safe mixing!



Gentle mixing applications demand smooth rocking and rolling action. Our 6 and 10 Rollers, operated at fixed and infinitely adjustable speed deliver this requirement efficiently. Easily removable attachments provide for quick cleaning in case of sample spills. Removable rollers allow for the use of larger tubes. Truly, a Rock n' Roll experience in the laboratory!





# Loopster | Spin your Loop!



Rotate your samples smoothly and effectively, at fixed or infinitely variable speeds with freely adjustable rotary angles. Ideal for biological samples, particularly blood samples and also suitable for separating and mixing of powdered and liquid samples in multiple tube sizes as large as 50 ml conical tubes. Easily removable attachments provide for quick cleaning in case of sample spills.



# Loopster | Accessories



#### DS 1 Tube attachment

48 x 1.5 ml microcentrifuge tubes; Ø 10 mm



Ident. No.

Ident. No.

Ident. No.

Ident. No.

Ident. No.

#### DS 6.1 Spare clips

48 x 1.5 ml, Ø 10 mm, 10 pieces





DS 2 Tube attachment

24 x 5 ml tubes, Ø 12 mm



DS 6.2 Spare clips

24 x 5 ml tubes, Ø 12 mm, 10 pieces



Ident. No.

Ident. No.

Ident. No.



DS 3 Tube attachment

20 x 15 ml centrifuge tubes, Ø 16 mm



DS 6.3 Spare clips

20 x 15 ml, Ø 16 mm, 10 pieces



DS 4 Tube attachment

12 x 30 ml, Ø 25 mm



DS 6.4 Spare clips

12 x 30 ml, Ø 25 mm, 10 pieces



DS 5 Tube attachment

12 x 50 ml centrifuge tubes, Ø 28 mm



DS 6.5 Spare clips

12 x 50 ml, Ø 28 mm, 10 pieces



#### DS 6 Universal disc\*

Single tube attachment for holding five different kinds of tubes for greater versatility.

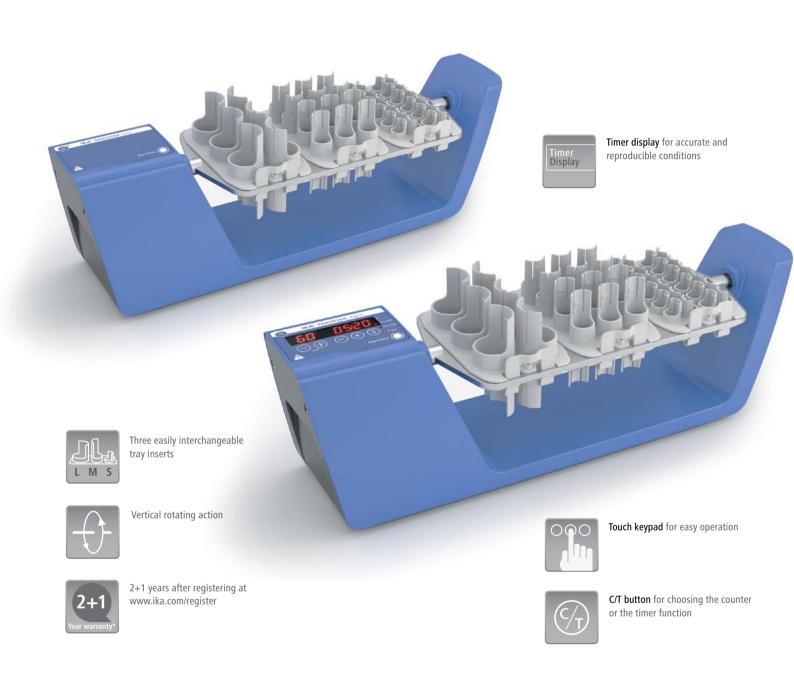
Ident. No. 0004524500

\* Not included in the delivery.



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

# Trayster | Swirl your way to perfect mixing!



Overhead shakers with vertical rotating action for smooth and effective mixing at fixed or infinitely adjustable speed. Ideal for biological samples, particularly blood and suitable for the separating and mixing of powdered and liquid samples in tubes of up to 50 ml. Easily removable attachments provide for quick cleaning in case of sample spills.





# Trayster | Accessories



#### TR 1 Tube insert

24 x 1.5 ml microcentrifuge tubes; Ø 10 mm





#### TR 2 Tube insert

24 x 5 ml tubes, Ø 12 mm





#### TR 3 Tube insert

12 x 15 ml centrifuge tubes, Ø 16 mm





6 x 50 ml centrifuge tubes, Ø 28 mm



Ident. No. 0004525400

\* All the above accessories not included in the delivery.



The KS 3000 series is the latest addition to the incubator shaker family. These sleek, compact, high-performance shakers are designed for safe, unattended operation in a temperature-controlled environment. Additionally, KS 3000 ic control is equipped with a built-in cooling coil for connection to an external cooling unit. Precise temperature control makes the incubator shaker a reliable asset in every lab, ensuring quiet, vibration-free and reliable operation - an excellent device for controlled mixing!



# Accessories | KS 3000 i / ic control



#### AS 260.1 Universal attachment

For various types of vessels. Infinitely variable clamping rolls allow universal adaptation to the vessels.

#### Included with delivery:

- 1 x AS 1.60 Basic holder,
- 4 x AS 1.61 Clamping roll,
- 8 x AS 1.5 Fastening screw

Dimensions (W x D x H)	410 x 370 x 32 mm
Set-up plate	320 x 320 mm
Weight	460 g
Ident. No. 0003120600	

#### AS 260.3 Dish attachment

For smooth movement for cell cultures, nutrient media in Petri dishes, culture bottles and vessels with a low center of gravity. With integrated slip-resistant foil (PP).

STICKMAX		
Dimensions (W x D x H)	20	00 x 200 mm
Permissible ambient temperature		5 – 80 °C
Max. speed		300 rpm
Number of adhesive mats per sha-	KS 130	1 pcs.
ker	KS/HS 260	3 pcs.
	KS/HS 501	4 pcs.
	KS 3000 i	2 pcs. 4 pcs.
	KS 4000 i	4 pcs.

#### labworldsoft®

labworldsoft® is a multi-purpose software program for measuring, controlling and regulating laboratory devices.







#### AS 260.2 Fixing clip attachment

For shaking flasks, Erlenmeyer flasks and bottles with a round cross-section (without fixing clips).

#### Accessories:

Fixing clips: AS 2.1, AS 2.2, AS 2.3, AS 2.4, AS 2.5



#### AS 260.5 Separating funnel attachment

For shaking out, salting out, extracting, eluting and enriching. The 3 clamping rolls (included in delivery) are height-adjustable for adaption to different separating funnel sizes. The separating funnels are secured with O-rings (6 O-rings included).

#### **STICKMAX**

Universal adhesive mat for KS 130, KS/HS 260, KS/HS 501, KS 3000 and KS 4000 shakers.



Ident. No. 0003920000

#### PC 1.1 Cable

RS-232 cable 2, 9-pin, M/F, 3 m.

Ident. No. 0002616700

# 3D Shakers | Technical data



#### Rocker 2D basic | digital

Technical data
Type of movement
Shaking diameter
Permissible shaking weight
(incl. attachment)
Motor rating input / output
Permissible ON time
Speed range
Speed display
Timer
Timer display
Operating mode
Dimensions (W x D x H)
Weight
Permissible ambient temp.
Permissible relative moisture
Protection class acc. to DIN
EN 60529
Interface
Voltage
Frequency

rocking 8° (angle) | 2.5 – 15° (angle) 16/9W 100% 5 - 80 rpm 7 segment LED no  $| \infty / 1 s - 99.9 h$ none | 7 segment LED continuous operation | timer and continuous operation 280 x 330 x 150 mm 2.2 kg 4 - 50 °C 80% IP 21 100 - 240 V 50/60 Hz 24 V

Rocker 2D basic: Ident. No. 0004002000

Rocker 2D digital: Ident. No. 0004003000



#### Rocker 3D basic | digital

tumbling	
8° (angle)   0 – 15° (angle)	
2 kg	

16 / 9 W

100%

30 rpm (fixed) | 5 – 80 rpm

none | 7 segment LED

no |  $\infty$  / 1 s – 99.9 h

none | 7 segment LED

continuous operation | timer and continuous operation
280 x 330 x 165 mm | 280 x 330 x 185 mm
2.2 kg
4 – 50 °C

80%

IP 21

no 100 – 240 V 50/60 Hz 24 V

Rocker 3D basic: Ident. No. 0004000000

Rocker 3D digital: Ident. No. 0004001000



#### Loopster basic | digital

rotating	
adjustable from horizontal to vertical	
2 kg	

16 / 9 W
100%
20 rpm (fixed)   5 — 80 rpm
none   7 segment LED
no   ∞ / 1 s − 99.9 h
none   7 segment LED
continuous operation   timer and continuous operation
300 x 300 x 360 mm
3 kg
4 – 50 °C
80%
IP 21
no
100 – 240 V
50/60 Hz

Loopster basic: Ident. No. 0004015000 Loopster digital: Ident. No. 0004016000

24 V

DC Voltage



#### Trayster basic | digital

recimical data	
Type of movement	rotating
Shaking diameter	vertical or horizontal
Permissible shaking weight (incl. attachment)	2 kg
Motor rating input / output	16 / 9 W
Permissible ON time	100%
Speed range	20 rpm (fixed)   5 – 80 rpm
Speed display	none   7 segment LED
Timer	no   ∞ / 1 s — 99.9 h
Timer display	none   7 segment LED
Operating mode	continuous operation   timer and continuous operation
Dimensions (W x D x H)	460 x 160 x 150
Weight	1.7 kg
Permissible ambient temp.	4 – 50 °C
Permissible relative moisture	80%
Protection class acc. to DIN EN 60529	IP 21
Interface	no
Voltage	100 – 240 V
Frequency	50/60 Hz
DC Voltage	24 V

Technical data

Trayster basic: Ident. No. 0004005000
Trayster digital: Ident. No. 0004006000



#### Roller 6 basic | digital

rocking and rolling 24.5 mm (high) 2 kg

16 / 9 W

100%

30 rpm (fixed) | 5 – 80 rpm

none | 7 segment LED

no |  $\infty$  / 1 s – 99.9 h

none | 7 segment LED

continuous operation | timer and continuous operation

240 x 545 x 115

4.5 kg

4 – 50 °C

80%

IP 21

50/60 Hz 24 V Roller 6 basic: **Ident. No. 0004010000** 

Roller 6 digital: Ident. No. 0004011000

100 - 240 V



#### Roller 10 basic | digital

rocking and rolling 24.5 mm (high) 2 kg

50/60 Hz

24 V

16 / 9 W

100%

30 rpm (fixed) | 5 − 80 rpm

none | 7 segment LED

no | ∞ / 1 s − 99.9 h

none | 7 segment LED

continuous operation | timer and continuous operation

380 x 545 x 115 mm

7 kg

4 − 50 °C

80%

IP 21

no

100 − 240 V

Roller 10 basic: Ident. No. 0004012000 Roller 10 digital: Ident. No. 0004013000

# Incubator shakers | Technical data





#### Technical data

Type of movement Orbital diameter Permissible shaking weight (incl. attachment) Motor rating input / output Power input Permissible ON time Speed range Speed display Timer Timer display Time setting range Operating mode Heating temperature range Heat output Temperature display Temp. stability (0.2 I  $H_2O$ ; RT 25°C, T = 37°C) Dimensions (W x D x H) Weight Permissible ambient temperature Permissible relative moisture Protection class acc. to DIN EN 60529 Interface Voltage Frequency

#### KS 3000 i control | ic control

orbital
20 mm
7.5 kg
45 / 10 W
1120 W
100%
10 — 500 rpm
LED
yes
LED
1 s – 999 h
timer and continuous operation
RT +5 - 80 °C   RT -10 - 80 °C
1000 W
LED
± 0.1 K
465 x 430 x 695 mm
35 kg   37 kg
15 – 32 °C
80%
IP 30
RS 232, USB
230 V
50/60 Hz

#### KS 4000 i control | ic control

orbital
20 mm
20 kg
82 / 24 W
1120 W
100%
10 — 500 rpm
LED
yes
LED
1 s – 999 h
timer and continuous operation
RT +5 - 80 °C   RT -10 - 80 °C
1000 W
LED
± 0.1 K
580 x 525 x 750 mm
50 kg   55 kg
15 – 32 °C
80%
IP 30
RS 232
230 V
50/60 Hz

KS 3000 i control: Ident. No. 0003940000 KS 3000 ic control: Ident. No. 0003940100 KS 4000 i control: Ident. No. 0003510000 KS 4000 ic control: Ident. No. 0003510100

# Shakers | Technical data



80%

IP 21

no

100 - 240 V

50/60 Hz

orbital
4.5 mm
0.5 kg
10 / 8 W
100%
0 — 3000 rpm
scale   digital
no   ∞ / 1 s − 999 min
none   digital
continuous / touch operation
timer and continuous / touch operation
148 x 205 x 63 mm
2.9 kg
5 – 40 °C

MS 3 basic: Ident. No. 0003617000 MS 3 digital: Ident. No. 0003319000



#### lab dancer

orbital			
4.5 mm			
max. 50 m	ıl (1 test tul	be)	
1.2 / 0.8 V	V		
100%			
2800 rpm			
none			
no			
none			
touch oper	ation		
100 x 70 r	mm (Ø x H)		
0.55 kg			
5 – 40 °C			
80%			
IP 40			
no			
100 – 240	) V		



50/60 Hz



#### **VORTEX Genius 3**

orbital

4 mm
0.4 kg
58 / 10 W
100%
500 – 2500 rpm
scale 0 – 6
no
none
continuous / touch operation
127 x 149 x 136 mm
4.5 kg
5 – 40 °C
80%
IP 21

Ident. No. 0003340000

no

230 V

50/60 Hz

Technical data Type of movement

Shaking diameter Permissible shaking weight (incl. attachment) Motor rating input / output Permissible ON time Speed range Speed display Timer Timer display Operating mode Dimensions (W x D x H)

Weight

EN 60529 Interface

Voltage

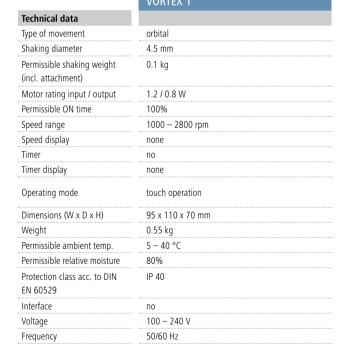
Frequency

Permissible ambient temp. Permissible relative moisture

Protection class acc. to DIN











#### VORTEX 4 basic | digital

100%

orbital
4.5 mm
0.5 kg
 10 / 8 W

0 – 3000 rpm
scale   digital
no   ∞ / 1 s — 999 min
no   digital
continuous / touch operation
timer and continuous / touch operation
176 x 190 x 63 mm
3 kg
5 – 40 °C
80%
IP 21

no		
100 - 240 V		
50/60 Hz		

VORTEX 4 basic: Ident. No. 0004049600 VORTEX 4 digital: Ident. No. 0004050100



#### VXR basic Vibrax®

orbital			
4 mm			
2 kg			

35 / 1	3.2 W					
100%						
0 – 22	200 rpm					
scale						
no						
none						

#### continuous operation 157 x 247 x 130 mm

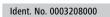
6.1 kg
5 – 40 °C
80%
IP 21
no
230 V
ENIGN Uz

Ident. No. 0002819000



#### MTS 2/4 digital Microtitier shaker

	WITS 214 digital Wilcrotitier Shaker
Technical data	
Type of movement	orbital
Shaking diameter	3 mm
Permissible shaking weight (incl. attachment)	2 or 4 microtiter plates
Motor rating input / output	35 / 13.2 W
Permissible ON time	100%
Speed range	0 — 1100 rpm
Speed display	scale
Timer	∞ / 1 — 99 min
Timer display	digital
Operating mode	timer and continuous operation
Dimensions (W x D x H)	185 x 320 x 105 mm
Weight	2.7 kg
Permissible ambient temp.	5 – 40 °C
Permissible relative moisture	80%
Protection class acc. to DIN EN 60529	IP 21
Interface	no
Voltage	230 V
Frequency	50/60 Hz





#### KS 130 basic | control

orbital

4 mm

2 kg
45 / 10 W
100%
80 — 800 rpm
LED line   digital
$\infty$ / 5 $-$ 50 min $\mid$ $\infty$ / 0 $-$ 9 h 59 min
LED line   digital
timer and continuous operation
270 x 316 x 98 mm
8.8 kg
5 – 50 °C
80%
IP 21

50/60 Hz

KS 130 basic: Ident. No. 0002980000

no | RS 232

230 V

KS 130 control: Ident. No. 0002980100
KS 130 control (without end point positioning):
Ident. No. 0004278200



#### KS 260 basic | control

orbital

10 mm

230 V

50/60 Hz

7.5 kg
45 / 10 W
100%
20 — 500 rpm   10 — 500 rpm
LED line   digital
∞ / 5 − 50 min   ∞ / 0 − 9 h 59 min
LED line   digital
timer and continuous operation
360 x 420 x 98 mm
8.5 kg   8.8 kg
5 − 50 °C
80%
IP 21
no   RS 232

KS 260 basic: Ident. No. 0002980200
KS 260 control: Ident. No. 0002980300
KS 260 control (without end point positioning): Ident. No. 0004278400

# Shakers | **Technical data**



#### KS 501 digital

Technical data	
Type of movement	orbital
Shaking diameter	30 mm
Permissible shaking weight (incl. attachment)	15 kg
Motor rating input / output	70 / 19 W
Permissible ON time	100%
Speed range	0 — 300 rpm
Speed display	digital
Timer	∞ / 1 – 56 min
Timer display	digital
Operating mode	timer and continuous operation
Dimensions (W x D x H)	505 x 585 x 120 mm
Weight	26 kg
Permissible ambient temp.	5 – 50 °C
Permissible relative moisture	80%
Protection class acc. to DIN EN 60529	IP 21
Interface	no
Voltage	230 V
Frequency	50/60 Hz

Ident. No. 0002526400



#### HS 260 basic | control

reciprocating

20 mm
7.5 kg
45 / 10 W
100%
20 – 300 rpm   10 – 300 rpm
LED line   digital
∞ / 5 – 50 min   ∞ / 0 – 9 h 59 min
LED line   digital
timer and continuous operation
360 x 420 x 100 mm
8.5 kg   8.8 kg
5 − 50 °C
80%
IP 21
no   RS 232
230 V
50/60 Hz

HS 260 basic: Ident. No. 0003066600

HS 260 control: Ident. No. 0003066700
HS 260 control (without end point positioning):
Ident. No. 0004278600



reciprocating	
30 mm	
15 kg	
70 / 19 W	
100%	
0 – 300 rpm	
digital	
∞ / 1 – 56 min	
digital	
timer and continuous op	peration
505 x 585 x 120 mm	
26 kg	
5 – 50 °C	
80%	
IP 21	
no	
230 V	
50/60 Hz	

Ident. No. 0002527000

# Accessories | KS 4000 i / ic control

#### 



#### AS 4000.1 Universal attachment

For use with various types of vessels. Infinitely variable clamping rolls allow universal adaptation to the vessels.

#### Included with delivery:

1 x Basic holder, 6 x Clamping roll, 12 x Fastening screw

AS 1.401	
Length	417 mm



#### AS 1.401 Clamping roll

Spare for use with universal attachment AS 4000.1.



#### AS 1.402 Fastening screw

Spare for use with universal attachment AS 4000.1. Two AS 1.402 fastening screws are required for fastening a clamping roll onto the corresponding basic holder.

AS 4000.2	
Dimensions (W x D x H)	470 x 444 x 25 mm
Number of fixing clips (volume)	50 x AS 2.1 (25 ml)
	48 x AS 2.2 (50 ml)
	25 x AS 2.3 (100 ml)
	16 x AS 2.4 (250 ml)
	12 x AS 2.5 (500 ml)
	7 x AS 2.6 (1000 ml)
Set-up plate	430 x 430 mm
Weight	2650 g



#### AS 4000.2 Fixing clip attachment

For shaking flasks, Erlenmeyer flasks and bottles with a round cross section (without fixing clips).

AS 4000.3	
Dimensions (W x D x H)	470 x 444 x 25 mm
Set-up plate	430 x 430 mm
Weight	800 g



Ident. No. 0003710100

#### AS 4000.3 Dish attachment

For smooth shaking operations in the low viscosity range, e.g. for cell cultures, nutrient media in Petri dishes, culture bottles and vessels with a low center of gravity. With integrated slip-resistant foil (PP).

AS 1.400	
Dimensions (W x D x H)	446 x 447 x 135 mm



#### AS 1.400 Basic holder

Spare for use with universal attachment AS 4000.1

# Accessories | VXR basic



#### VX 11.1 Test tube insert

Attachment for Eppendorf tubes or test tubes.

VX 11.2	
Bore holes (number)	41
Hole Ø	12 mm
Ident. No. 0003659100	

#### VX 11.2 Test tube insert

Attachment for test tubes.

VX 11.3	
Bore holes (number)	32
Hole Ø	16 mm
Ident. No. 0003659200	

#### VX 11.3 Test tube insert

Attachment for test tubes.

VX 11.4	
Bore holes (number)	18
Hole Ø	20 mm
Ident. No. 0003659300	

#### VX 11.4 Test tube insert

Attachment for test tubes.



#### VX 1 One-hand attachment

For shaking single, non-fixed vessels of 1 - 250 ml.

VX 2	
Dimensions (W x D x H)	140 x 145 x 115 mm
Material	macrolon
Weight	300 g
Ident. No. 0000568900	

#### VX 2 Test tube attachment

For up to 36 test tubes or centrifugal tubes with a diameter of 16 mm.

VX 2E	
Dimensions (W x D x H)	210 x 210 x 65 mm
Weight	790 g



Ident. No. 0001618100

#### VX 2E "Eppendorf" attachment

For intensive mixing of up to 64 "microcentrifuge" tubes (1.5 ml).



#### VX 7 Dish attachment

For careful mixing of culture bottles, Petri dishes, etc.

VX 8	
Dimensions (W x D x H)	265 x 136 x 60 mm
Clamping range	25 – 135 mm
Min. height of vessel	80 mm
Weight	760 g
Ident. No. 0000910400	P. C.

#### VX 8 Universal attachment

For rapid and secure clamping, e.g. 2 Erlenmeyer flasks up to 500 ml.



#### VX 8.1 Clamping roll



#### VX 11 Basic holder

Attachment for test tube inserts.



# Accessories | KS 130

# AS 130.1 Dimensions (W x D x H) 325 x 234 x 88 mm Set-up plate 220 x 220 mm Weight 850 g

Ident. No. 0008017300

#### AS 130.1 Universal attachment

For use with various types of vessels by means of universal, infinitely variable clamping rolls.

#### Included with delivery:

1 x AS 1.30 Basic holder, 3 x AS 1.31 Clamping roll, 6 x AS 1.5 Fastening screw

Dimensions (W x D x H)	230 x 230 x 24 mn
Number of fixing clips (volume)	20 x AS 2.1 (25 ml
	12 x AS 2.2 (50 ml
	12 x AS 2.3 (100 ml
115	4 x AS 2.4 (250 ml
	4 x AS 2.5 (500 ml
Weight	650
dent. No.	
0003115000	

#### AS 130.2 Fixing clip attachment

For processing round flasks, measuring flasks and Erlenmeyer flasks. Please order fixing clips separately. Accessories:

Fixing clips: AS 2.1, AS 2.2, AS 2.3, AS 2.4, AS 2.5

Dimensions (W x D x H)	420 x 270 x 32 m
Set-up plate	220 x 340 m
Weight	370
dent, No.	

#### AS 130.3 Dish attachment

For smooth shaking operations in the low viscosity range, e.g. Petri dishes or culture bottles. With integrated slip-resistant foil (PP).

AS 130.4	
Dimensions (W x D x H)	220 x 230 x 95 r
Capacity	
Vessel Ø	10 – 16 n
Min. height of vessel	80 n
Min. height of vessel	670
dent. No.	

#### AS 130.4 Test tube attachment

For intensive shaking, e.g. small tubes, test tubes, cuvettes, centrifuge tubes.



# Accessories | HS / KS 260

#### AS 260.1 Dimensions (W x D x H) 425 x 335 x 135 mm 320 x 320 mm Set-up plate Weight 1600 g



#### AS 260.1 Universal attachment

For various types of vessels. Infinitely variable clamping rolls allow universal adaptation to the vessels.

#### Included with delivery:

Ident. No. 0008017400

1 x AS 1.60 Basic holder, 4 x AS 1.61 Clamping roll,

8 x AS 1.5 Fastening screw

AS 260.2	
Dimensions (W x D x H)	330 x 330 x 24 mm
Number of fixing clips (volume)	56 x AS 2.1 (25 ml)
	23 x AS 2.2 (50 ml)
	23 x AS 2.3 (100 ml)
	11 x AS 2.4 (250 ml)
	9 x AS 2.5 (500 ml)
	5 x AS 2.6 (1000 ml)
Weight	1290 g



Ident. No. 0003115500

#### AS 260.2 Fixing clip attachment

For shaking flasks, Erlenmeyer flasks and bottles with a round cross-section (without fixing clips).

#### Accessories:

Fixing clips: AS 2.1, AS 2.2, AS 2.3, AS 2.4, AS 2.5

Dimensions (W x D x H)	410 x 370 x 32 mm
Set-up plate	320 x 320 mm
Weight	460 g

#### AS 260.3 Dish attachment

For smooth movement for cell cultures, nutrient with a low center of gravity. With integrated



AS 260.5	
Dimensions (W x D x H)	334 x 425 x 145 mm
Capacity: (number of separating	6 x 50 ml
funnels per volume, pear-shaped)	5 x 100 ml
	3 x 250 ml
	3 x 500 ml
Weight	1550 g



#### AS 260.5 Separating funnel attachment

For shaking out, salting out, extracting, eluting and enriching. The 3 clamping rolls (included in delivery) are height-adjustable for adaption to different separating funnel sizes. The separating funnels are secured with O-rings (6 O-rings included).

AS 1.30	
Dimensions (W x D x H)	252 x 234 x 88 mm



#### AS 1.30 Basic holder

For use with universal attachment AS 130.1. **Accessories:** AS 1.31, AS 1.5

Ident. No. 0003148000

AS 1.60	
Dimensions ( W x D x H )	348 x 335 x 135 mm



#### AS 1.60 Basic holder

For use with universal attachment AS 260.1. Accessories:

AS 1.61, AS 1.5

Ident. No. 0003149000

AS 1.10	
Dimensions (W x D x H)	480 x 480 x 120 mm



#### AS 1.10 Basic holder

For use with universal attachment AS 501.1 and separating funnel attachments AS 501.2, AS 501.3 and AS 501.6.

#### Accessories:

AS 1.11, AS 1.6, AS 1.7, AS 1.8, AS 1.12, AS 1.13

Ident. No. 0002339700

AS 1.31	
For basic holder	AS 1.30
Length	228 mm

AS 1.61	
For basic holder	AS 1.60
Length	335 mm

AS 1.11	
For basic holder	AS 1.10
Length	410 mm

 Ident. No.

 0003030500
 AS 1.31

 0003030501
 AS 1.61

 0002339800
 AS 1.11

#### Clamping roll

AS 1.31 AS 1.61 AS 1.11

# Accessories | HS / KS 501 digital

#### AS 501.1 Dimensions (W x D x H) 480 x 500 x 120 mm Set-up plate 420 x 420 mm Weight 4000 g



#### AS 501.1 Universal attachment

For various types of vessels with a minimum volume of 50 ml. Ideally more than 250 ml. The clamping rolls may be adjusted to two levels.

#### Included with delivery:

1 x AS 1.10 Basic holder, 6 x AS 1.11 Clamping roll, 12 x AS 1.6 Fastening screw

AS 501.2	
Dimensions (W x D x H)	480 x 505 x 190 mm
Capacity:	12 x 50 ml
(number of separating funnels	10 x 100 ml
per volume, pear-shaped)	6 x 250 ml
Weight	4180 g



#### AS 501.2 Separating funnel attachment

For shaking out, eluting, extracting, gassing out, dissolving, enriching, etc. Adjustment for the clamping rolls is infinitely variable, the set-up height can be changed by means of clamping devices.

#### Included with delivery:

1 x AS 1.10, 6 x AS 1.11, 6 x AS 1.6, 6 x AS 1.7

AS 501.3	
Dimensions (W x D x H)	480 x 505 x 190 mm
Capacity:	4 x 500 ml
(number of separating funnels	3 x 1000 ml
per volume, pear-shaped)	2 x 2000 ml
Weight	3720 g



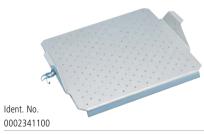
#### AS 501.3 Separating funnel attachment

Same features as AS 501.2.

#### Included with delivery:

1 x AS 1.10, 4 x AS 1.11, 4 x AS 1.6, 4 x AS 1.7

AS 501.4		
Dimensions (W x D x H)	475 x 460	x 95 mm
Number of fixing clips	110 x AS 2.1	(25 ml)
(volume)	55 x AS 2.2	(50 ml)
	35 x AS 2.3	(100 ml)
	16 x AS 2.4	(250 ml)
	12 x AS 2.5	(500 ml)
	8 x AS 2.6 (	(1000 ml)
Weight		2640 g



#### AS 501.4 Fixing clip attachment

For shaking flasks, Erlenmeyer flasks and pear-shaped flasks (without fixing clips).

#### Accessories:

Fixing clips: AS 2.1, AS 2.2, AS 2.3, AS 2.4, AS 2.5



AS 501.5	
Dimensions (W x D x H)	450 x 450 x 45 mm
Set-up plate	420 x 420 mm
Weight	1120 g



#### AS 501.5 Dish attachment

For smoothly shaking dishes, but also for smooth mixing in vessels with a large, flat bottom (wide-necked Erlenmeyer flasks and beakers). A plastic foil with mild adhesive prevents the vessel from slipping.

AS 501.6	
Dimensions (W x D x H)	480 x 505 x 225 mm
Capacity: (number of separating funnels per volume, pear-shaped)	4 x 1000 ml
Weight	5500 g



#### AS 501.6 Separating funnel attachment

Same features as AS 501.2. This attachment will hold  $4 \times 1000$  ml separating funnels. Included with delivery:

1 x AS 1.10, 4 x AS 1.6, 4 x AS 1.12, 8 x AS 1.13

STICKMAX		
Dimensions (W x D x H)	20	00 x 200 mm
Permissible ambient temperature		5 – 80 °C
Max. speed		300 rpm
Number of adhesive mats per shaker	KS 130	1 pcs.
	KS/HS 260	3 pcs.
	KS/HS 501	4 pcs.
	KS 3000 i	2 pcs.
	KS 4000 i	4 pcs.



Ident. No. 0003920000

#### STICKMAX

Universal adhesive mat for KS 130, KS/HS 260, KS/HS 501, KS 3000 and KS 4000 shakers.

- Ideal for frequently changing vessel types and sizes
- Self-adhesive
- Devices can be easily removed by side tilting movement
- Suitable for disinfection
- Peel-away strength required: 5 N/cm<sup>2</sup>



# Accessories | HS / KS 501 digital and VORTEX Shakers



#### AS 1.5 Fastening screw

Fastening screw for the universal attachments AS 130.1, AS 260.1 and the separating funnel attachment AS 260.5. Two AS 1.5 fastening screws are required for fastening a clamping roll onto the corresponding basic holder.

Ident. No. 0002979400



#### AS 1.7 Clamping device

Two AS 1.6 and two AS 1.7 clamping devices are required for fastening two clamping rolls one above the other (for clamping separating funnels). For basic holder AS 1.10 only.





#### AS 1.6 Fastening screw

Two AS 1.6 clamping devices are required for fastening a clamping roll to the corresponding basic holder (for basic holder AS 1.10 only).

Ident. No. 0001268400



#### AS 1.8 Supporting clamping device

Two AS 1.6 clamping devices and two AS 1.8 supporting clamping devices are required if a clamping roll is to be attached at a higher position (e.g. for fixing a vessel which has a higher point of gravity). For basic holder AS 1.10 only.



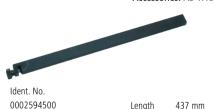
For attaching two AS 1.13 ground section holders for fixing 1000 ml separating funnels. For basic holder AS 1.10 only.

Accessories: AS 1.13



#### AS 1.13 Ground section holder

For attaching separating funnels with ground opening NS 29 (2 x AS 1.13 necessary per separating funnel). For basic holder AS 1.10 only.



Length 437 mm



Ident. No. 0002597000

Ident. No.

0001268900

For flask volume	AS 2.1	25 ml
	AS 2.2	50 ml
	AS 2.3	100 ml
	AS 2.4	200 ml / 250 ml
	AS 2.5	500 ml
	AS 2.6	1000 ml

	Ident. No.		
1	0001234300	AS 2.1	
2	0001234400	AS 2.2	
3	0001234500	AS 2.3	
4	0001234600	AS 2.4	
5	0001234700	AS 2.5	
6	0003819300	AS 2.6	

- 1 AS 2.1 Fixing clip 2 AS 2.2 Fixing clip 3 AS 2.3 Fixing clip
- 4 AS 2.4 Fixing clip
- 5 AS 2.5 Fixing clip 6 AS 2.6 Fixing clip













#### VG 3.1 Standard attachment

Standard attachment for reagent glasses / small vessels (continuous / touch operation), included with delivery.

Ident. No. 0003341200



#### VG 3.2 One-hand attachment

One-hand attachment, 88 mm, round, with rubber insert (continuous / touch operation).

Ident. No. 0003342300



#### VG 3.21 Rubber pad

For use with VG 3.2 One-hand attachment.

Ident. No. 0004206500

#### VG 3.3 Universal attachment

Universal attachment, 150 mm, with rubber insert (continuous operation).

Ident. No. 0003342400



#### VG 3.31 Test tube attachment\*

For 54 Eppendorf tubes (continuous operation).



#### VG 3.32 Test tube attachment\*

For 18 reagent glasses, 10 mm (continuous operation).



#### VG 3.33 Test tube attachment\*

For 12 reagent glasses, 12 mm (continuous operation).



#### VG 3.34 Test tube attachment\*

For 8 reagent glasses, 16 mm (continuous operation).



#### VG 3.35 Test tube attachment\*

Ident. No.

0003344100

For 8 reagent glasses, 20 mm (continuous operation).



#### VG 3.36 Erlenmeyer flask attachment\*

For 1 Erlenmeyer / round flask from 100 to 250 ml (continuous operation).



#### VG 3.37 Microtiter plate attachment\*

For 1 standard microtiter plate (continuous operation).





<sup>\*</sup> For VG 3.3 Universal attachment

#### MS 3.1 Standard attachment

For test tubes and small vessels up to Ø 50 mm, included with the minishakers MS 3 basic and MS 3 digital.



Ident. No. 0003426300

#### MS 3.3 Universal attachment

For various foam inserts, included with the minishakers MS 3 basic and MS 3 digital.



Ident. No. 0003426600

#### MS 3.4 Microtiter plate attachment

For use with a microtiter plate, included with the minishaker MS 3 digital.



Ident. No. 0003426400

#### MS 3.5 PCR plate attachment

For holding PCR plates, 96-well. Includes holder and insert.



0003428000

#### MS 1.21 One-hand insert

For inserting into the universal attachment, included with the minishakers MS 3 basic and MS 3 digital.



Ident. No. 000L001540

#### MS 1.31 Test tube insert

For inserting into universal attachment, for 14 test tubes Ø 10 mm, material: ethylvinyl-acetate.



Ident. No. 000L001840

Ident. No.

000L001850

#### MS 1.32 Test tube insert

For inserting into the universal attachment, for 6 test tubes Ø 12 mm. Material: ethylvinyl-acetate. Included with the minishakers MS 3 digital.



#### MS 1.33 Test tube insert

For inserting into the universal attachment, for 4 test tubes Ø 16 mm. Material: ethylvinyl-acetate.



Ident. No. 000L001860

#### MS 1.34 Test tube insert

For inserting into the universal attachment, for any number of bore holes. Material: ethylvinyl-acetate.



Ident. No. 000L001830



# Shakers | Vessel capacity

Erlenmeyer Flask	ζS									
IKA® Shaker	Attachment Combination	25 ml	50 ml	100 ml	250 ml	500 ml	1000 ml	2000 ml	3000 ml	5000 ml
KS 130	STICKMAX	23	15	6	5	4	1	1**		0
KS 130	AS 130.1	15	12	6	2	2	1	1**		0
KS 130	required clamping rolls	4	4	3	2	2	2	2		0
KS 130	AS 130.2 Fixing Clip Attachment	12	12	8	4	4	1	0		0
KS 260	STICKMAX	25	16	9	10	9	5	2		1
KS 260	AS 260.1	21	18	15	8	6	3	1	•	1
KS 260	required clamping rolls	4	4	4	4	4	3	2		2 (4)
KS 260	AS 260.2 Fixing Clip Attachment	31	28	16	10	8	5	4		0
KS 501	STICKMAX	25	16	9	25	16	9	5	1	1
KS 501	AS 501.1	50	40	30	16	12	9	4	4	1
KS 501	required clamping rolls	6	6	6	5	4	6	3	3	2
KS 501	AS 501.4 Fixing Clip Attachment	50	35	30	16	12	8	5	0	0
KS 4000 i control	STICKMAX	25	16	9	29	16	9	4	1	0
KS 4000 i control	AS 4000.1	45	40	30	16	9	8	4	2	0
KS 4000 i control	required clamping rolls	6	6	6	8	4	4	4	2	0
KS 4000 i control	AS 4000.2 Fixing Clip Attachment	55	38	25	16	11	7	4	0	0



Beakers (high fo	rm)											
IKA® Shaker	Attachment Combination	25 ml	50 ml	100 ml	150 ml	250 ml	400 ml	600 ml	800 ml	1000 ml	2000 ml	3000 ml
KS 130	STICKMAX	25	16	9	9	9	5	4	4	4*	1*	1*
KS 130	AS 130.1 max. quantity	18	15	8	6	6	3	2	2	2	1*	1*
KS 130	required clamping rolls for AS 130.1	4	3	3	3	3	2	2	2	2	2	2
KS 260	STICKMAX	64	36	25	25	16	9	9	9	9	4*	4*
KS 260	AS AS 260.1 max. quantity	45	28	18	15	15	8	6	6	6	2	2
KS 260	required clamping rolls for AS 260.1	6	5	4	4	4	3	3	3	3	2	2
KS 501	STICKMAX	121	81	49	36	36	25	16	16	9	9	4
KS 501	AS 501.1 max. quantity	96	90	40	35	24	20	12	12	12	12	4
KS 501	required clamping rolls for AS 501.1	9	8	5	5	5	4	4	4	4	3	4
KS 4000 i control	STICKMAX	121	81	49	36	36	25	16	16	9	9	4
KS 4000 i control	AS 4000.1 max. quantity	77	48	35	30	24	20	12	12	12	6	4
KS 4000 i control	required clamping rolls for AS 4000.1	8	7	6	5	5	4	4	4	4	3	3

<sup>\*</sup> Limited recommendation! \*\* Not recommended!

IKA® Shaker	Attachment Combination	25 ml	50 ml	100 ml	200 ml	250 ml	500 ml	1000 ml	2000 ml
KS 130	STICKMAX	25	16	9	5	5	2	1**	**
KS 130	AS 130.1	16	12	6	3	2	2	0	0
KS 130	required clamping rolls for AS 130.1	5	4	3	3	2	2	0	0
KS 130	AS 130.2	15	8	8	4	4	4	1	0
KS 260	STICKMAX	49	36	25	10	10	9	4	**
KS 260	AS 260.1 max. quantity	32	24	20	12	16	6	2	**
KS 260	required clamping rolls for AS 260.1	5	5	7	6	6	4	2	**
KS 260	AS 260.2	30	29	23	9	9	8	4	3
KS 501	STICKMAX	100	64	36	20	16	9	20	**
KS 501	AS 501.1 + 10 AS 1.11 Clamping Roll + 20 AS 1.6 Fastening Screw	70	56	30	25	20	12	6	**
KS 501	required clamping rolls for AS 501.1	8	14	10	6	5	6	4	**
KS 501	AS 501.2	55	50	35	20	20	11	8	5
KS 4000 i control	STICKMAX	100	64	36	20	20	16	6*	0
KS 4000 i control	AS 4000.1	70	40	24	20	20	12	6	0
KS 4000 i control	required clamping rolls for AS 4000.1	8	6	5	8	8	6	4	0
KS 4000 i control	AS 4000.2	52	49	30	19	19	11	6	0



Beakers (low for	m)													
IKA® Shaker	Attachment Combination	25 ml	50 ml	100 ml	150 ml	250 ml	400 ml	600 ml	800 ml	1000 ml	2000 ml	3000 ml	5000 ml	10000 ml
KS 130	STICKMAX	25	16	9	9	5	4	4	4	2	1	1*	1*	**
KS 130	AS 130.1 max. quantity	15	8	8	8	4	2	2	2	2	2	1*	0	**
KS 130	required clamping rolls for AS 130.1	4	3	3	3	3	2	2	2	2	2	2		
KS 260	STICKMAX	64	36	25	16	10	9	9	6	6	4	2	1	1*
KS 260	AS 260.1 max. quantity	32	24	15	12	8	6	6	6	2	2	2	1	1*
KS 260	required clamping rolls for AS 260.1	5	5	4	4	3	3	3	3	2	2	2	2	2
KS 501	STICKMAX	100	64	49	36	25	16	16	10	9	9	4	4	1
KS 501	AS 501.1 max. quantity	70	48	42	30	20	16	12	9	9	6	4	1	1
KS 501	required clamping rolls for AS 501.1	8	7	6	5	4	4	3	3	3	3	3	2	2
KS 4000 i control	STICKMAX	100	64	49	36	25	16	16	10	9	9	4	4	1*
KS 4000 i control	AS 4000.1 max. quantity	70	48	30	20	20	12	12	9	6	4	4	2	1*
KS 4000 i control	required clamping rolls for AS 4000.1	8	7	6	5	5	4	4	4	3	3	3	2	2

<sup>\*</sup> Limited recommendation! \*\* Not recommended!

### IKA® offers more



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# Knowledge | Select your ideal shaker

Type of motion	Description	Diagram	Shaking diameter	Max. Permissible shaking weight
/ortex	The cup generates a	(A)	4.5 mm	0.5 kg
	'whirlpool' vortex action		4.5 mm	0.5 kg
			4.5 mm	max. 50 ml (1 test tube)
			4.5 mm	0.1 kg
			4 mm	0.4 kg
			4.5 mm	0.5 kg
			4.5 mm	0.5 kg
Orbital	The platform moves in a	(B)	20 mm	20 kg
	circular orbit		20 mm	20 kg
			20 mm	7.5 kg
			20 mm	7.5 kg
			4 mm	2 kg
			3 mm	2 or 4 microtiter plates
			4 mm	2 kg
			4 mm	2 kg
			10 mm	7.5 kg
			10 mm	7.5 kg
			30 mm	15 kg
Reciprocating	The platform moves back and forth horizontally	(C)	20 mm	7.5 kg
			20 mm	7.5 kg
			30 mm	15 kg
Rocking	The platform rocks on a	D •	8° (angle)	2 kg
See-saw action)	central pivot	+ 🛆	0 – 15° (angle)	2 kg
Rocking	The platform moves in a	(E)	8° (angle)	2 kg
3D Tumbling motion)	three-dimensional motion	( Let	0 – 15° (angle)	2 kg
Rocking and Rolling	The platform rocks on a	(F) A	24.5 mm (high)	2 kg
	central pivot as well as revolves around a fixed	+ 🕹	24.5 mm (high)	2 kg
	point		24.5 mm (high)	2 kg
			24.5 mm (high)	2 kg
Rotating	Platform revolves at a	(G)	adjustable from horizontal to vertical	2 kg
-	tilted angle		adjustable from horizontal to vertical	
			vertical or horizontal	
			vertical or horizontal	



basic | digital























(B)





lab dancer VORTEX 1 VORTEX Genius 3 VORTEX 4

basic | digital

KS 3000 i | KS 3000 ic VXR basic Vibrax®

MTS 2/4 digital

microtiter shaker basic | control

Speed range	Recommended IKA® device	Applications
0 – 3000 rpm	MS 3 basic	Suitable for shaking small vessels and microtiter plates
0 – 3000 rpm	MS 3 digital	
2800 rpm (fixed)	lab dancer	Ideal for use with all small vessels of up to 30 mm in diameter, e.g. test tubes,
1000 – 2800 rpm	VORTEX 1	centrifuge tubes and microcentrifuge tubes
500 – 2500 rpm	VORTEX Genius 3	Suitable for mixing in test tubes, microcentrifuge tubes, reagent glasses/small vessels,
0 – 3000 rpm	VORTEX 4 basic	Erlenmeyer/round flask and microtiter plates
0 – 3000 rpm	VORTEX 4 digital	
10 – 500 rpm	KS 4000 i control	Ideal for unattended operation in a temperature-controlled environment
0 – 500 rpm	KS 4000 ic control	
10 – 500 rpm	KS 3000 i control	
10 – 500 rpm	KS 3000 ic control	
0 – 2200 rpm	VXR basic Vibrax®	Ideal for mixing in test tubes, microtiter plates, bottles, flasks and beakers. A wide range
0 – 1100 rpm	MTS 2/4 digital microtiter shaker	of attachment combinations allows for using almost all shapes and sizes of vessels
80 – 800 rpm	KS 130 basic	
30 – 800 rpm	KS 130 control	
20 – 500 rpm	KS 260 basic	
10 – 500 rpm	KS 260 control	IKZ
0 – 300 rpm	KS 501 digital	TECHNOLS
20 – 300 rpm	HS 260 basic	Ideal for shaking out, eluting, extracting, gassing out, dissolving, enriching, etc.
10 – 300 rpm	HS 260 control	
) – 300 rpm	HS 501 digital	
5 – 80 rpm	Rocker 2D basic	Used for homogenous mixing in flasks, culture flasks, Petri dishes and tubes
5 – 80 rpm	Rocker 2D digital	
30 rpm (fixed)	Rocker 3D basic	Ideal for low foaming agitation, DNA extractions, staining and de-staining procedures, etc.
5 – 80 rpm	Rocker 3D digital	
30 rpm (fixed)	Roller 6 basic	Recommended for mixing blood samples, viscous substances and liquid-solid suspensions
5 – 80 rpm	Roller 6 digital	where minimum aeration is required
30 rpm (fixed)	Roller 10 basic	
5 – 80 rpm	Roller 10 digital	
20 rpm (fixed)	Loopster basic	Ideal for keeping biological samples in suspension and for general mixing applications
5 – 80 rpm	Loopster digital	
20 rpm (fixed)	Trayster basic	
5 – 80 rpm	Trayster digital	





(B)



HS 260 basic | control



**HS 501** digital

 $(\mathbf{C})$ 



Rocker 2D basic | digital



Rocker 3D basic | digital



Roller 6 basic | digital

Roller 10 basic | digital



**Loopster** basic | digital



**Trayster** basic | digital









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# **KA German** technology

## **FAQ**

## Is it possible to operate using 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.

## Can I place my shaker in a CO<sub>2</sub> chamber or in an incubator?

If the relative humidity does not exceed 80% and the temperature stays within 5-40 °C (partially until 50°C), the shaker can be used in a  $\rm CO_2$  chamber or an incubator.

# Which IKA® shaker of the HS/KS series starts automatically after a power failure?

KS 130, KS 260, KS 3000 and KS 4000 start automatically in certain modes (C, C+B) after a power failure.

#### What kind of vortex shakers does IKA® offer?

(They should have a touch function, but also come equipped with various attachments, e.g. for microtiter plates) The Lab Dancer, MS 3 basic, digital VORTEX 4 and VORTEX Genius 3 are the appropriate devices. MS 3 basic, digital and VORTEX Genius 3 have a variety of attachments for most variable shaking tasks.

# Is it possible to shake deepwell plates with the MTS 2/4?

No, deepwell plates cannot be fixed properly; their center of gravity is simply too high.



