



# Laboratory Reactors



**designed**  
for scientists

**IKA® laboratory reactors are modular systems for the optimization and reproduction of chemical reaction, mixing, dispersal and homogenizing processes at the laboratory level.**

The reactor systems can be adapted individually to a wide range of tasks. This includes, for example, the manufacture of creams and lotions, the grinding and reduction to fibres of solids in liquids or polymers, as well as the mixing and drying of powders.

On the following pages, we present our four laboratory reactor systems: LR 1000 basic and control, LR-2.ST, magic LAB® and magic PLANT.

**3 Years warranty\***

\* 2 years plus 1 year after registration at [www.ika.com/register](http://www.ika.com/register), excluding glass parts and wearing parts

Protection class according to DIN EN 60529: IP 21



Torque trend measurement shows viscosity changes in the product



Integrated weighing function with a weighing range up to 2 kg



Option of connecting a pH electrode



**IKA+**

- > Reproducible procedures
- > Continuous high quality
- > Control and documentation using the labworldsoft® software



# The IKA® Laboratory Reactor Portfolio

## Pharmaceuticals



## Chemicals



## Food



## Cosmetics



### Technical data

Temperature	120 °C
Viscosity	100,000 mPas
Volume min.	350 ml
Volume min. for dispersing	600 ml
Volume max.	1,000 ml
Throughput	–
Vacuum	25 mbar
Pressure	–
Dispersing	Batch with T 25

### Price

### LR 1000 basic | control

Temperature	120 °C
Viscosity	100,000 mPas
Volume min.	350 ml
Volume min. for dispersing	600 ml
Volume max.	1,000 ml
Throughput	–
Vacuum	25 mbar
Pressure	–
Dispersing	Batch with T 25

### 4,999.- EUR | 8,903.- EUR

Ident. No. 0008040100  
Ident. No. 0010001035



### LR-2.ST

Temperature	230 °C
Viscosity	150,000 mPas
Volume min.	500 ml
Volume min. for dispersing	800 ml
Volume max.	2,000 ml
Throughput	–
Vacuum	25 mbar
Pressure	–
Dispersing	Batch with T 25

### 9,886.- EUR | 8,997.- EUR 8,619.- EUR | 8,162.- EUR

the High-Performer Ident. No. 0020013291  
the Allrounder Ident. No. 0020013292  
the Versatile Ident. No. 0020013293  
the Compact Power Ident. No. 0020013294



### magic LAB® 2000/03

Temperature	120 °C
Viscosity	10,000 mPas
Volume min.	–
Volume min. for dispersing	500 ml
Volume max.	2,000 ml
Throughput	10 – 100 l/h
Vacuum	500 mbar
Pressure	2.5 bar
Dispersing	Inline UTL

### 7,390.- EUR with Module ULTRA-TURRAX® UTL

Ident. No. U078310



### magic PLANT

Temperature	150 °C
Viscosity	100,000 mPas
Volume min.	500 ml
Volume min. for dispersing	1,000 ml
Volume max.	2,000 ml
Throughput	–
Vacuum	25 mbar
Pressure	2.5 bar / 5 bar
Dispersing	Batch with T 25 or Inline with DR

### 19,900.- EUR | 28,300.- EUR | 20,400.- EUR

basic Ident. No. 20001186  
inline Ident. No. U107703  
powder Ident. No. U107159



Multiple vessels can be used with just one base unit. This means that more sets of samples can be processed per day.

Suited for processing high-viscosity samples at highest temperatures. Various types of agitators can be used to meet individual requirements.

Unique and multifunctional small-scale laboratory mixer designed for mixing, dispersing, wet milling, and for the incorporation of powders into liquids. Its modular design allows for small scale simulations of almost every IKA® production machine and its identical process parameters ensure perfect optimization of product recipes and reliable scale-up to full production.

The IKA® magic PLANT combines different mixing technologies with innovative drying processes. Depending on the version, it is ideally suited for batch, inline and powder operation modes.



Packages | LR 1000

LR 1000 basic Package

Ident. No. 0008040100 4,999.- EUR

Description	Ident. No.
1 LR 1000 basic base	0003600099
3 LR 1000.1 reactor vessel	0003602000
5 LR 1000.61 sensor receptacle	0004664400
6 PT 100.30 temperature sensor	0004284700
7 H 11 main cable	0001091500

LR 1000 control Package

Ident. No. 0010001035 8,903.- EUR

Description	Ident. No.
2 LR 1000 control base	0025001938
4 LR 1000.3 reactor vessel	0025001955
5 LR 1000.61 sensor receptacle	0004664400
6 PT 100.30 temperature sensor	0004284700
7 H 11 main cable	0001091500
8 USB cable – USB A to Micro-B, 2 m	0004335000



Packages | LR-2.ST

LR-2.ST the High-Performer

Ident. No. 0020013291 9,886.- EUR

Description	Ident. No.
LR-2.ST stand system	0003042900
LR-2.SI safety disconnection	0003318300
EUROSTAR 200 P4 control overhead stirrer	0004090000

LR-2.ST the Allrounder

Ident. No. 0020013292 8,997.- EUR

Description	Ident. No.
LR-2.ST stand system	0003042900
LR-2.SI safety disconnection	0003318300
EUROSTAR 200 control overhead stirrer	0003992000

LR-2.ST the Versatile

Ident. No. 0020013293 8,619.- EUR

Description	Ident. No.
LR-2.ST stand system	0003042900
LR-2.SI safety disconnection	0003318300
EUROSTAR 100 control overhead stirrer	0004028500

LR-2.ST the Compact Power

Ident. No. 0020013294 8,162.- EUR

Description	Ident. No.
LR-2.ST stand system	0003042900
LR-2.SI safety disconnection	0003318300
EUROSTAR 60 control overhead stirrer	0004440000





Packages | magic LAB® / magic PLANT

Accessories | magic LAB® / magic PLANT

magic LAB®

Ident. No. U078310 7,390.- EUR

magic LAB® 2000/03  
The basic magic LAB® 2000/03 unit is equipped with a UTL single-stage dispersion system. Additional modules can be installed as an option, but are not included in the scope of delivery (see accessories page 9).



magic PLANT

	Description	Ident. No.	Price
A	magic PLANT basic	20001186	19,900.- EUR
B	magic PLANT inline	U107703	28,300.- EUR
C	magic PLANT powder	U107159	20,400.- EUR



- A magic PLANT basic**

  - > Adjustable speed drive for perfect agitation of liquids or suspensions
  - > Tiltable, double jacketed and insulated vessel
  - > Special stirrer tools included e. g. anchor and propeller type
  - > Optional ULTRA-TURRAX® T 25 digital disperser for perfect emulsions and suspensions
- B magic PLANT inline**

  - > The latest development in dispersion technology for the finest and most stable emulsions and suspensions
  - > Circulation of the product via the circulation line with the two-stage rotor-stator system in the connected magic LAB® laboratory dispersion machine
  - > Stirring tools, such as propeller stirrers and toothed disc, available as an option
  - > Anchor stirrer included in scope of delivery
- C magic PLANT powder**

  - > Efficient gentle mixing process
  - > Special powder stirrer
  - > Spiral stirrer included in scope of delivery
  - > Tiltable vessel for improved mixing and drying results
  - > Draining by full inclination of the vessel

magic PLANT accessories

	Ident. No.	Price
Dissolver agitator	20002170	255.- EUR
T 25 connection kit 220 – 240 V	20001910	265.- EUR
Consisting of adapter and cable from T 25 to the magic PLANT		
Safety valve	20003010	380.- EUR
5 bar (increased pressure only possible with versions without magic LAB®)		
Temperature sensor lid (PT 100)	20003346	380.- EUR
Spiral agitator	U106093	560.- EUR
Conversion kit inline to basic	20001209	380.- EUR
Bottom outlet valve and plug		



magic LAB® accessories

Three-stage disperser for applications with high shear requirements; ideal for producing the finest emulsions and suspensions.	Colloid Mill with cone shaped rotor and stator; used for the production of colloidal solutions (finest suspensions) and emulsions. The gap between the rotor and stator is adjustable.	Suction of solids into fluids in the recirculation process. Free from lumps and dust processing of powders and granules. Energyefficient homogeneous mixing.	Wet milling as with the MKmodule. The cones are furnished with an abrasion-resistant tungsten carbide-cobalt coating. Narrowest grinding gap enables producing of even finer suspensions.	Finest wet milling of granular, viscous and pasty products by means of two corundum disks. High shear forces mill the product finely between the rotor and the axially movable stator.	Continuous mixing and dispersion of powders in liquids. Patented process. Fast and homogeneous mixing in only one passage, avoiding agglomerates. Solids content up to 80%.
Module DISPAX-REACTOR® DR	MK module colloid mill	Module CMX	Module MKO cone mill	Module MCD	Module MHD
80 l/h (H <sub>2</sub> O) 14,600 rpm 23 m/s	200 l/h (H <sub>2</sub> O)** 14,600 rpm 23 m/s*	1000 l/h (H <sub>2</sub> O)** 11,000 rpm 19.5 m/s*	25 l/h (H <sub>2</sub> O)** 14,600 rpm 23 m/s*	1 – 20 kg/h** 12,000 rpm 19.5 m/s*	60 l/h (H <sub>2</sub> O) 14,600 rpm 23 m/s*
1,190.- EUR	2,700.- EUR	2,400.- EUR	2,700.- EUR	2,700.- EUR	2,110.- EUR
Ident. No. U078352	Ident. No. U076662	Ident. No. U075333	Ident. No. U079664	Ident. No. 20001675	Ident. No. U075262

\* At standard speed / speed adjustable from 3,000 to 26,000 rpm  
\*\* With maximum gap between rotor and stator



# Accessories | Laboratory Reactors

## LR 1000 accessories

Ident. No.	Price
	
LR 1000.1 0003602000	2,613.- EUR
Reactor vessel, 1,000 ml, FPM seals, 4 connections	
	
LR 1000.3 0025001955	3,252.- EUR
Reactor vessel, 1,000 ml, FFKM seals, 6 connections	
	
LR 1000.10 0004663100	327.- EUR
Anchor stirrer with PEEK scrapers	
	
LR 1000.11 0004663000	193.- EUR
Anchor stirrer, stainless steel	
	
LR 1000.20 0004663200	255.- EUR
Flow breaker, stainless steel	

	
LR 1000.41 0004664300	359.- EUR
Shaft receptacle for installing the S 25 KV dispersing tools	
	
LR 1000.61 0004664400	329.- EUR
Sensor receptacle for installation of the PT 100.30 temperature measuring sensor	
	
LR 1000.64 0004663300	656.- EUR
pH redox electrode	
	
LR 1000.65 0004663400	555.- EUR
pH electrode receptacle	
	
LR 1000.70 0025003123	184.- EUR
Lid holder	
	
WH 10 0020000984	16.- EUR
WiCo Holder	

## LR-2.ST accessories

Ident. No.	Price
	
LR 2000.10 0002508400	1,097.- EUR
Anchor stirrer with PEEK scrapers	
	
LR 2000.11 0002509500	511.- EUR
Anchor stirrer, stainless steel	
	
LR 2000.20 0002508500	501.- EUR
Flow breaker, stainless steel	
	
LR 2.1 0003070000	630.- EUR
Reactor vessel, single-walled, 2,000 ml	
	
LR 2000.1 0002508300	2,837.- EUR
Reactor vessel, double-walled, 2,000 ml	

	
LR 2000.2 0002509600	3,562.- EUR
Reactor vessel, double-walled, 2,000 ml with bottom drain valve	
	
LR 2000.3 0002509700	4,084.- EUR
Stainless steel reactor vessel, double-walled, 2,000 ml	
	
LR 2000.4 0003064900	6,779.- EUR
Stainless steel reactor vessel, double-walled with bottom drain 2,000 ml	
	
LR 2000.40 0002509200	445.- EUR
Shaft receptacle to carry the S 25 KV dispersing tools	
	
LR 2000.60 0002509300	402.- EUR
Sensor receptacle for carrying the PT 100.30 temperature measuring sensor	
	
PT 1000.61 0020009881	on request
Temperature sensor, Ø 6 mm	

LR 2000.64 0020010075	931.- EUR
pH process electrode	
LR 2000.65 0003172600	657.- EUR
pH electrode receptacle	
	
LR-2.SP 0003326400	336.- EUR
Splinter shield	
	
ALMEMO 2490 0004709300	1,467.- EUR
Universal measuring instrument with two measuring channels	
	
LT 5.20 0002606700	991.- EUR
High-temperature hose kit (2 pcs), stainless steel, 1.5 m, Ø 10 mm	
	
LT 5.23 0002235000	104.- EUR
Hose adapter	
	
LT 5.25 0020000878	404.- EUR
Lock coupling	
	
LT 5.26 0020000879	277.- EUR
Lock adapter	
	
LT 5.27 0020000880	404.- EUR
Hose adapter	

General accessories for all laboratory reactors	
Ident. No.	Price
	
T 25 digital LR 0020008820	1,517.- EUR
Disperser	
	
S 25 KV - 25 F 0002404000	1,661.- EUR
Dispersing tool	
	
S 25 KV - 25 G 0002466900	1,661.- EUR
Dispersing tool	
	
S 25 KV - 18 G 0002348000	1,619.- EUR
Dispersing tool	
	
S 25 KV - 2802 0020008825	1,549.- EUR
Dissolver agitator shaft, high speed	
	
HBR 4 control LR 0010001849	3,131.- EUR
Heating bath, 4 l, incl. PT 1000.61, d: 6 mm, for external temperature regulation of the medium	
	
labworldsoft® 0004720000	1,212.- EUR
Laboratory software	



# Laboratory Reactors | Complementary Products

MVP 10 basic	
Technical data	
Pump rate max. (50/60Hz)	1.7 m³/h
Pump rate max. (50/60Hz)	28.3 l/min
Suction levels	2
Input pressure min.	7 mbar
Price	1,404.- EUR
Ident. No. 0003980000	

Membrane vacuum pump for oil-free applications, vacuum hoses included in delivery.

MVP 10 basic accessories		
	Ident. No.	Price

1	VCV 1	0020004850	495.- EUR
	Vacuum control valve manual		

VCV 2	0020004893	821.- EUR
Vacuum control valve digital		

2	VSS 1	0020005194	694.- EUR
	Vacuum safety set		

LWS cooling option		
	Ident. No.	Price
Multi Power Switch	0020003454	68.- EUR
Adapter for expert key		

MV 1 power plug	0010001655	422.- EUR
Cooling-water-valve with power plug		



**IKA®+**  
IKA® offers a wide variety of laboratory equipment for your applications.



VC 10 vacuum controller	
Technical data	
Vacuum sensor type	ceramic AL203
Measurement range	1 – 1100 mbar
Resolution pressure	1 mbar
Vacuum valve	yes
Display	TFT
Temperature measurement resolution	1 K
Accuracy of temperature measurement	±1 K
Timer	yes
Material in contact with medium	Al2O3, PTFE, FPM, PPS
Dimensions (W x H x D)	95 x 150 x 110 mm
Weight	1.5 kg
Protection class according to DIN EN 60529	IP 20
RS 232 / USB interface	yes
Price	1,390.- EUR
Ident. No. 0020005132	

VC 10 accessories		
	Ident. No.	Price

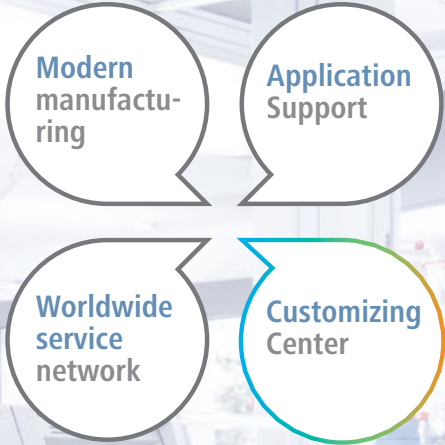
VC 10.300	0020011105	146.- EUR
Check valve		
VC 10.400	0035001735	189.- EUR
Bench bracket		
PT 1000.60	0003516800	105.- EUR
Temperature sensor, stainless steel		



RC 2 basic   control		HBC 5 basic   control	
Technical data			
Appliance type	Recirculating chiller	Heated bath circulator	
Heater capacity (230 V)	–	2,500 W	
Cooling capacity at 20°C	400 W	–	
Working temperature range	-20 °C – RT   -30 °C – RT	RT+10°C – 250 °C	
Temperature stability DIN 12876	± 0.1 K   ± 0.05 K	± 0.02 K   ± 0.01 K	
Bath volume range	1.5 – 4 l	4.5 – 6.5 l	
Max. flow rate	18 l/min	31 l/min	
USB / RS 232 interface	yes	yes	
Price	2,990.- EUR   3,990.- EUR	2,750.- EUR   3,250.- EUR	
Ident. No. 0004171000   0004173000		Ident. No. 0004125000   0004127000	

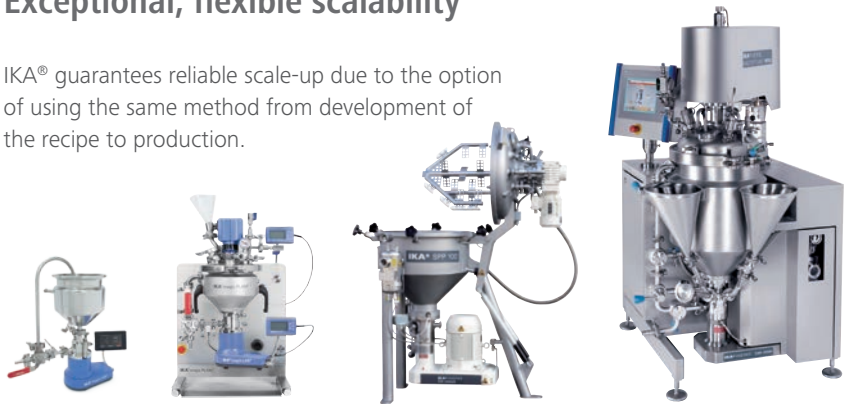


IKA® offers more



### Exceptional, flexible scalability

IKA® guarantees reliable scale-up due to the option of using the same method from development of the recipe to production.



### Customizing Center

It is important that IKA® products work for your application. We have a special 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.

Please visit [www.ika.com/customizingcenter](http://www.ika.com/customizingcenter) to review already implemented product modifications.



### Worldwide service network – direct contact in your region

Our dedicated team of engineers provides comprehensive worldwide technical service. Please feel free to contact IKA® directly or your dealer in case of any service questions.

In the event of an equipment malfunction or technical questions regarding devices, maintenance and spare parts, please call us at 00 8000 4524357 (00 8000 IKAHELP) or send an email to [service@ika.de](mailto:service@ika.de)



### 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 processes that involve stirring, shaking, dispersing, grinding, heating, analyzing and distilling.

Call us at 00 8000 4522777 (00 8000 IKAAPPS) or send an email to [applicationsupport@ika.de](mailto:applicationsupport@ika.de) or visit our website at [www.ika.com/applicationsupport](http://www.ika.com/applicationsupport)





Prices are valid from Nov, 1st 2016  
to Oct, 31st 2017  
All prices exclusive to VAT  
Subject to alteration of prices  
Subject to technical changes

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