

MI CCRA



homogenizing

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ART moderne Labortechnik

Asian Paints

BASF Coatings

Bayer

Daimler Chrysler

Degussa Food Ingredients

DKFZ Heidelberg

EADS Germany

GE India

Glenmark Pharm. India

Henkel

HIPP

La Mer Cosmetics

Laverana Cosmetics

OSRAM

Schwan Stabilo Cosmetics

Schwarz Pharma

Weleda



1 Headquarter Müllheim, Germany

The ART of Homogenizing!

As a specialist in the homogenizing technology, "ART" is developing and manufacturing powerful, high quality and high speed dispersing- and homogenizing instruments since 1994.

Our goal has always been to offer easy to handle instruments for achieving reliable, reproducible sample results coupled with an unmatched performance to price ratio.

The MICCRA-Series of ART disperses, homogenizes, emulsifies, suspends, cuts up and disrupts sample materials of nearly all kinds, based on the rotor-stator principle, but with higher performance.

The modular construction of the MICCRA-Series allows flexible and multiple combinations of different powerful drives, shafts in several lengths, and all the dispersing accessories, tailored to the individual requirements.

The systems can either be operated as a hand-held, post or wall mounted or a tripod support device. With our goal of ensuring customer satisfaction, we emphasize our own R & D and the cooperation with leading universities and research institutes.

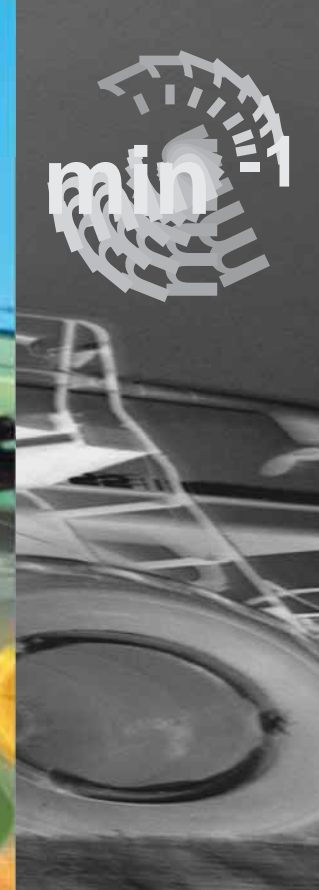
Continually in touch with our customers, we develop and put into practice solutions matching the specific requirements of users.

"...by the use of the MICCRA-System, a multiplicity of samples could be processed rapidly and within a short time, without impairing the reproducibility of the results."

University hospital of the Saarland; Germany

100,000

min



If you want to get it done...

The Pacemaker.

Customers confirm within long term tests:

"The powerful drives with exclusive high rpm rates matched with the MICCRA tools, reduce processing time significantly without destroying the sensitive samples".

Rpm rates up to 39,000 rpm with the MICCRA D-8, provide high quality sample results in addition to a high sample throughput e.g. in the field of diagnostics (human, veterinarian, plant).

The MICCRA-Series offers a substantial time advantage for you.

MICCRA - Homogenizing by ART



high tech - made in Germany



Looking for reliable results?

Highest reproducibility.

Since the founding of ART, the MICCRA-Series has made its way into a growing number of laboratories. Compact design, flexible utilization and consistent high quality sample results, convince any user. This high class system offers an amazing performance to price ratio.

More and more users from science and research appreciate the advantage of the MICCRA-Series and require only the best systems.

With the MICCRA-Series you are taking the first step into reproducibility of the homogenizing process for the sample preparation.

This was not possible with comparable systems.

"With this system the tissues can be homogenized very quickly, thoroughly and carefully.

...for the homogenizing process with our RNA preparations the RNA yield was at least 50% to 100% higher than with other systems."

Max-Planck-Institute for breeding research; Cologne

Looking for fast and reliable homogenizing results?



...access all
areas
with us.

- .dispersing
- .homogenizing
- .emulsifying
- .suspending
- .cell disruption
- .sample preparation
- .reaction acceleration
- .wet grinding
- .crushing
- .disagglomerating
- .high-speed-mixing
- .aeration

...

Product Guide



10 years of Excellence in Rotor/Stator "ART".

ART-Labworks launched its product series for efficient and high quality homogenizers in 1994 and has been a market force ever since.

Two things characterize our product developments. First of all, our excellent knowledge of the demands of the market and our willingness to listen closely to what our customers require. Second, our commitment and our know-how convert these insights into something real.

We are proud of our achievements: ART-Labworks was the first company to combine high rpm rates with a compact design in homogenizers.

Whether it be durable and robust 316L SS or high-power battery units for a greater range of mobility – ART has lead the way for the entire industry in recent years with its landmark developments.

With our goal of ensuring customer satisfaction, we emphasize our own R & D and/or co-operate with leading universities and research institutes.

Continually in touch with the industry, we develop and put into practice solutions tailored to the customers specific requirements.

We're looking forward to hearing from you too.

Applications and markets

Within the last years, the MICCRA series has found its way into a growing number of laboratories. Compact design, flexible utilization, consistent high quality results and our amazing price-performance ratio, will convince any user.

Some market exemplar:

Biotechnology/Human and animal genetics

Human and veterinary medicine/clinical medicine

Food industry / trophology (food science)

Agricultural science / breeding research

Environmental industry

Pharmaceutical industry / pharmacology / toxicology

Chemical industry

Cosmetics industry

Petrochemistry

Dye and lacquer industry

Fiber-, textile-, cellulose industry

On the next page you will find a short system recommendation for some industries. If you cannot find the one matching with yours please use our application check list for your inquiry. We will gladly help you find the right system for your specific application.

10 years of Excellence

System recommendations

MICCRA tools offer a wide variety of potential applications in science, research, manufacturing, and other areas. The following check list is intended as a reference and we've divided the various tasks into a few main categories.

System

Field of use	Process	Tool	Sample volume
Biotechnology	Coarse crushing and final processing; preparation of emulsions and cell-suspensions; shredding of human, animal, and plant tissues.	DS-5/K DS-8/P	0.1 - 10 ml 1.0 - 100 ml
Medicine			
Food industry			
Pharmaceutical industry			
Pharmaceutical chemistry	Standard equipment for coarse crushing of hard solids in a liquid.	DS-20/PG DS-30/PG	100 - 5,000 ml 250 - 10,000 ml
Building materials industry			
Petrochemistry			
Environmental control			
Waste water/sludge	Coarse crushing and disruption of human, animal, and plant tissues.	DS-20/PG SmR DS-30/PG SmR	100 - 5,000 ml 250 - 10,000 ml
Medicine			
Food industry			
Paper/pulp industry			
Tobacco industry			
Environmental control			
Ceramics industry	Breaking up agglomerates, intense mixing, preparing suspensions.	DS-20/PG MiR DS-30/PG MiR	100 - 5,000 ml 250 - 10,000 ml
Dye and lacquer industry			
Metal working industry			
Waste water/sludge	Standard equipment for crushing / pulverizing of hard solids in a liquid, dispersing fine particles	DS-20/PF DS-30/PF	100 - 3,000 ml 250 - 8,000 ml
Dye and lacquer industry			
Leather industry			
Paper/pulp industry			
Pharmaceutical industry			
Environmental control			
Waste water/sludge	Standard equipment for final processing, sample preparation, and shredding of human, animal, and plant tissues.	DS-20/PF SmR DS-30/PF SmR	100 - 3,000 ml 250 - 8,000 ml
Biotechnology			
Medicine			
Food industry			
Paper/pulp industry			
Tobacco industry			
Textile industry			
Ceramics industry	Standard equipment for preparing emulsions, intense mixing.	DS-20/PF MiR DS-20/PF EmR DS-30/PF MiR DS-30/PF EmR	100 - 2,500 ml 250 - 7,000 ml
Cosmetics industry			
Dye and lacquer industry			
Food industry			
Paper/pulp industry			
Petrochemistry			
Ceramics industry	High-speed or intense mixing with less shearing effect.	RW-30/PG RW-40/PG	250 - 20,000 ml 2,000 - 50,000 ml
Food industry			
Environmental control			

recommendations

Another valid question to be asked concerns the material to be prepared. Fibrous materials, solid and liquid phases, small sample volumes/quantities.

For this special tasks we invite you to use the check list on page 18.



Markets & industries

The drive

By a light and compact design all Lab-drives can be used as **hand held units**.

The **powerful drive** comes up to high rpm rates (e.g. 39,000 rpm with the MICCRA D-8), thus reduces processing time significantly. The result is a low strain on the sample material and a new dimension of product quality.

Automatic **overload protection** increases the life span of the motor. Disconnection is pre indicated by red signal light. (MICCRA D-13)

Large **safety switch** for moment and continuous operation with integrated "quick stop" for emergency stop.

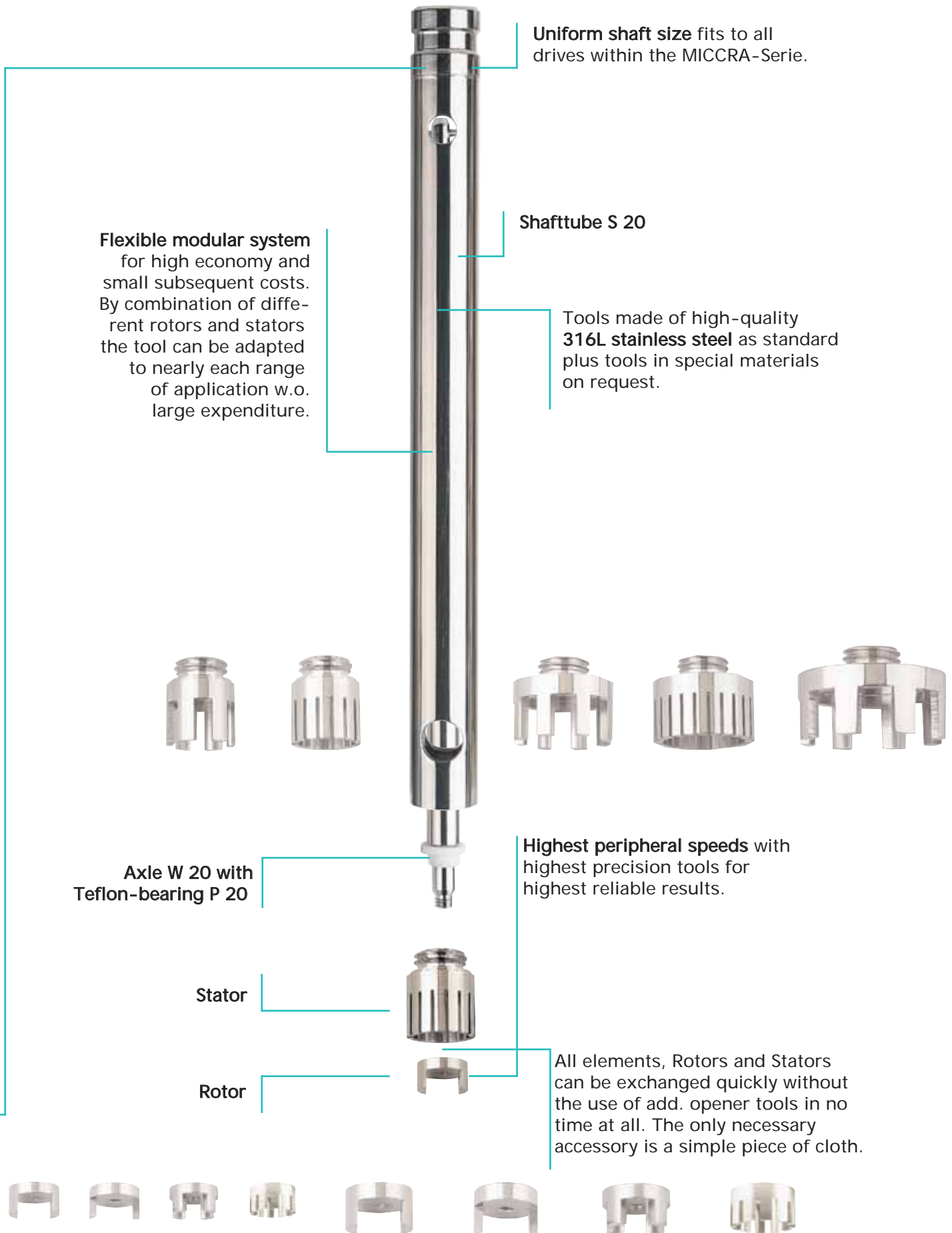
Comfortable and safe working with **smooth start** of the drive.

Extension of warranty (3+2) to 5 years

A **uniform shaft size** matches with all drives - fits to all tool combinations of ART.



The tool



Uniform shaft size fits to all drives within the MICCRA-Serie.

Shafttube S 20

Flexible modular system for high economy and small subsequent costs. By combination of different rotors and stators the tool can be adapted to nearly each range of application w.o. large expenditure.

Tools made of high-quality **316L stainless steel** as standard plus tools in special materials on request.

Axle W 20 with Teflon-bearing P 20

Highest peripheral speeds with highest precision tools for highest reliable results.

Stator

Rotor

All elements, Rotors and Stators can be exchanged quickly without the use of add. opener tools in no time at all. The only necessary accessory is a simple piece of cloth.

MICCRA D-1



The Tiny One!

The new economy-drive **MICCRA D-1** is a small hand-held dispersing- and homogenizing device for volumes from 0.1 up to 500ml.

It was especially developed for volumes treated in the Bio- and Genetechnology. It's an economic drive for a small price with a new "soft-touch" housing. More powerful and high speed than comparable systems on the market.

MICCRA D-3/PA



The Independent!

The first battery homogenizer with exclusive high power. This 350 Watts drive is superior even to some main-operated devices.

An unmatched rpm to power ratio comes up by its 12V DC mot or. It works up easily big sample volumes.

The **D-3/PA** is the first main-independent "outdoor" dispersing device for mobile operation and sample preparation on the spot.

Or did you ever homogenize 5,000ml with a 12V drive?

MICCRA D-8



The Genius!

Light, compact, strong and extremely high-speed.

These are the topics of this extraordinary drive which fits to all common laboratory applications from the agrarian technology to cell biology. A unique volume range from 0.1 up to 20,000ml can be handled with this unit and its unequalled results.

145 watt
73 watt
200-240V/50-60Hz

0.1-500 ml
5,000-35,000 rpm

Yes (cont. variable)

No

approx. 800g

Diameter 50x230mm

IP 20/ II

No

No

Yes

5-45 °C

up to 93%

Yes

2 years

01 00 00

350 watt
200 watt
12V DC (battery device)

100-5,000 ml
18,000 rpm

No, fixed

No

1.6 kg (incl.battery)

66 x 66 x 225mm

IP 20/ II

No

No

No

5-50 °C

up to 85%

Yes

3+ (2 years)

03 00 00

Incl.

Incl.

800 watt
480 watt
200-240V AC /50-60*
100-120V AC /50-60

0.1-20,000 ml
10,500 - 39,000 rpm

Yes (cont. variable)

Yes

1.35 kg

66 x 66 x 210mm

IP 20/ II

Thermal Sensor

Yes

Yes

5-50 °C

up to 85%

Yes

3+ (2 years)

08 00 00

*230V/60Hz not available

Power Input

Power Output

Voltage/Frequency

Recom. volume range

Speed range

Speed adjustment

Electronic stabilizer

Weight

Dimensions

Protective syst./safety class

Overload protection

Safety switch

Smooth start

Permissible ambient temp.

Permissible ambient humld.

CE label

Warranty

Order #

Battery

Battery Charger

MICCRA D-8Si



The Silencer!

The new **MICCRA D-8Si** is a silent version of our best-seller MICCRA D-8. It is the first hand held dispersing- and homogenizing device with a built in Silencer for a quiet operation. The build-in Silencer results in an amazing decrease of noise emission along with significant reductions of air-turbulence in laminar flow cabins. This is Important for the treatment of e.g. hazardous media.

MICCRA D-13



The Powerful!

Although its size is small, this drive is a real high power unit. With its integrated constant electronics and its powerful 1,300Watt motor work out big volumes and increasing viscosity keeping a constant number of revolutions.

MICCRA D-...

To be continued...

Power Input	800 watt
Power Output	480 watt
Voltage / Frequency	200-240V/50-60Hz* 100-120V/50-60Hz
Recom. volume range	0.1-20,000 ml
Speed range	10,500-39,000 rpm
Speed adjustment	Yes (cont. variable)
Electronic stabilizer	Yes
Weight	1.35 kg
Dimensions	66 x 66 x 210mm
Protective syst./safety class	IP 20/ II
Overload protection	Thermal Sensor
Safety switch	Yes
Smooth start	Yes
Permissible ambient temp.	5-50 °C
Permissible ambient humid.	up to 85%
CE label	Yes
Warranty	3+ (2 years)
Order #	08 00 01 230V/60Hz not available*
Battery	
Battery Charger	

Power Input	1,300 watt
Power Output	750 watt
Voltage / Frequency	200-240V/50/60Hz 100-120V/50/60Hz
Recom. volume range	100-50,000 ml
Speed range	8,500 -34,000 rpm
Speed adjustment	Yes (cont. variable)
Electronic stabilizer	Yes
Weight	1,8 kg
Dimensions	70 x 70 x 255mm
Protective syst./safety class	IP 20/ II
Overload protection	Thermal Sensor
Safety switch	Yes
Smooth start	Yes
Permissible ambient temp.	5-50 °C
Permissible ambient humid.	up to 85%
CE label	Yes
Warranty	3+ (2 years)
Order #	13 00 00
Battery	
Battery Charger	

Power Input	
Power Output	
Voltage / Frequency	
Recom. volume range	
Speed range	
Speed adjustment	
Electronic stabilizer	
Weight	
Dimensions	
Protective syst./safety class	
Overload protection	
Safety switch	
Smooth start	
Permissible ambient temp.	
Permissible ambient humid.	
CE label	
Warranty	
Order #	
Battery	
Battery Charger	

TOOLS for SMALL QUANTITIES

Technical Data

Tools for small quantities.
Plastic disposable tool for soft tissues.
(e.g. BSE Monitoring, infectious and
isotopic labelled materials).

DS-10/KS

Article designation

Treatable volume (refer to H₂O)

5-20 ml

Max. periph. Speed

13.2 m/s

Diam. of the Rotor

6.5 mm

Diam. of the Stator

10 mm

Tool length

116 mm

Max. insertion depth

fixed by the tube

Max. hardness acc. to "Mohs"

Tool made of Plastic

Sterilization/decontamination

Eau de Javelle (7%)

Sample material

Initial particle size

fibrous/soft/stringy tissues

approx. 5-10 mm

with hard/solid particles

not recommended

Order no.

97 00 00

TOOLS for BSE- SCREENING



Plastic Tool DS-10/KS

Delivery incl. the special tube PPT20 by ART.
(Patents on this Tool are pending)

Volume range 0.1 - 100 ml

Recommended drives: MICCRA D-1; D-8; and D8Si

Technical Data

STATORS

Tools for small quantities.
Stator and Rotor are integrated in the axle and/or the Shaft.

Article designation	DS-5/K	DS-8/P
	Treatable volume (refer to H ₂ O)	0.1-10 ml
Max. periph. Speed	7.3 m/s	11.4 m/s
Diam. of the Rotor	3.6 mm	5.6 mm
Diam. of the Stator	5 mm	8 mm
Tool length	120 mm	155 mm
Max. insertion depth	50 mm	90 mm
Max. hardness acc. to "Mohs"	max. 6	max. 6
Sterilization/decontamination	all known sterilization and decontamination methods	
Sample material	Initial particle size	
fibrous/soft/stringy tissues	3 mm	10 mm
with hard/solid particles	0.5 mm	3.5 mm
Order no.	00 05 00	00 08 00

ROTORS



TOOLS for SMALL QUANTITIES

Volume range 100-5,000 ml

Recommended drives: MICCRA D-3/PA; D-8; D8Si and D-13

STATORS

Technical Data

Stators

Rotors

ROTORS

Tools with Standard Rotor for solid/fluid media

Tools with Cutter Rotor for fibrous material

Tools with Mixing Rotor for disagglomeration

Tool with Emulsion Rotor for fluid/fluid media

2 in 1 tool for fibrous materials

Article designation	Treatable volume (refer to H ₂ O)	Max. periph. Speed	Diam. of the Rotor	Diam. of the Stator	Tool length	Max. insertion depth	Max. hardness acc. to "Mohs"	Sterilization/Decontamination	Initial particle size	Sample material	Order no.	
DS-20/PG	100-5,000 ml	30.6 m/s	15 mm	20 mm	250 mm ("XL"- Versions: 327 mm)	200 mm ("XL"-Versions: 277 mm)	max. 6	all known sterilization and decontamination methods	approx. 100 mm	approx. 50 mm	00 20 10	
DS-20/PF	100-3,000 ml										00 20 00	
DS-20/PG SmR	100-5,000 ml	30.6 m/s	15 mm	20 mm	250 mm ("XL"- Versions: 327 mm)	200 mm ("XL"-Versions: 277 mm)	max. 6	all known sterilization and decontamination methods	approx. 100 mm	approx. 50 mm	00 21 15	
DS-20/PF SmR	100-3,000 ml										00 21 05	
DS-20/PG MIR	100-5,000 ml	30.6 m/s	15 mm	20 mm	250 mm ("XL"- Versions: 327 mm)	200 mm ("XL"-Versions: 277 mm)	max. 6	all known sterilization and decontamination methods	approx. 100 mm	approx. 50 mm	00 22 15	
DS-20/PF MIR	100-3,000 ml										00 22 05	
DS-20/PG EmR	100-3,000 ml	30.6 m/s	15 mm	20 mm	250 mm ("XL"- Versions: 327 mm)	200 mm ("XL"-Versions: 277 mm)	max. 6	all known sterilization and decontamination methods	approx. 100 mm	approx. 50 mm	00 24 05	
DS-20/ZKS SmR	100-3,000 ml										00 21 25	
									approx. 8 mm	approx. 1,5 mm	with hard/solid particles	

2/P - Bundles

Article designation

The economic "2/P-Bundles" consist of a coarse and a fine stator each.

The desired end fineness is secured by changing the stator from coarse to fine w.o. large expenditure by the "quick-change-system".

00 20 04	00 20 08	00 20 12	Order no.
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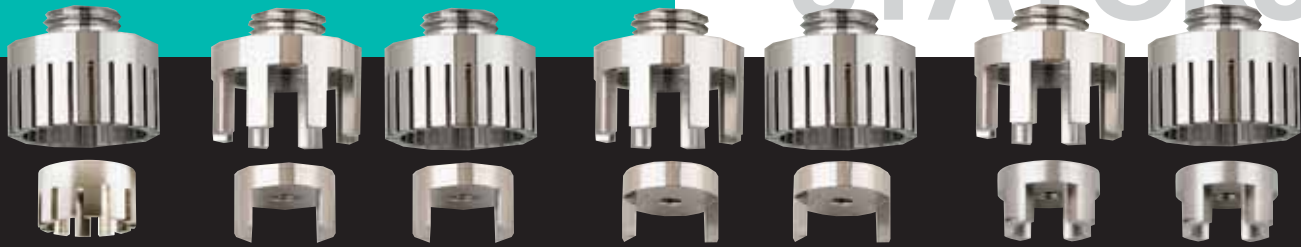
Volume range 250-10,000 ml

Recommended drives: MICCRA D-3/PA; D-8; D8Si and D-13

Technical Data

Stators

Rotors



Tool with Emulsion Rotor for fluid/fluid media

Tools with Standard Rotor for solid/fluid media

Tools with Cutter Rotor for fibrous material

Tools with Mixing Rotor for disagglomeration

DS-30/PF EmR

DS-30/PG

DS-30/PF

DS-30/PG SmR

DS-30/PF SmR

DS-30/PG MIR

DS-30/PF MIR

Article designation

Treatable volume (refer to H₂O)

250-8,000 ml

250-10,000 ml

250-8,000 ml

250-10,000 ml

250-8,000 ml

250-10,000 ml

250-8,000 ml

Max. periph. Speed

47 m/s

Diam. of the Rotor

23 mm

Diam. of the Stator

30 mm

Tool length

250 mm ("XL" - Versions: 327 mm)

Max. insertion depth

200 mm ("XL" - Versions: 277 mm)

Max. hardness acc. to "Mohs"

max. 6

Sterilization/Decontamination

all known sterilization and decontamination methods

Sample material

Initial particle size

w. fibrous/soft/stringy tissues

approx. 150 mm

approx. 100 mm

with hard/solid particles

max. 1,5 mm

approx. 12 mm

approx. 1,5 mm

approx. 12 mm

approx. 1,5 mm

approx. 12 mm

approx. 1,5 mm

Order no.

00 34 05

00 30 10

00 30 00

00 31 15

00 31 05

00 32 15

00 32 05

2/P - Bundles



DS-30 2/P

DS-30 2/P SmR

DS-30 2/P MIR

Article designation

The economic "2/P-Bundles" consist of a coarse and a fine stator each.

The desired end fineness is secured by changing the stator from coarse to fine w.o. large expenditure by the "quick-change-system".

Order no.

00 30 04

00 30 08

00 30 12

Volume range 1,000-50,000 ml

Recommended drive: MICCRA D-13

STATORS



Technical Data

Stators

Rotors



Tools with Mixing Rotor for high-speed mixing and dispersing with a lower shearing effect.

		Article designation
	RW-30/PG	RW-40/PG
1,000-20,000 ml	5,000-50,000 ml	Treatable volume (refer to H ₂ O)
30.6 m/s	41 m/s	Max. periph. Speed
15 mm	23 mm	Diam. of the Rotor
30 mm	40 mm	Diam. of the Stator
250 mm ("XL"- Versions: 327 mm)		Tool length
200 mm ("XL"-Versions: 277 mm)		Max. insertion depth
max. 6		Max. hardness acc. to "Mohs"
all known sterilization and decontamination methods		Sterilization/Decontamination
Initial particle size		Sample material
approx. 100	approx. 150	w. fibrous/soft/stringy tissues
8 mm	12 mm	with hard/solid particles
00 33 15	00 43 15	Order no.

MIXING TOOLS

FOR

LARGE VOLUMES



Accessories

Useful supplements relieving your daily lab work.

Ring SR 80

for fixing of conical vessels



Diameter 70 mm
Rod length 200 mm
Rod diam. 8 mm



Bosshead incl.
Order-no. 00 50 04

Plain 300x200 mm
Total height with 1 rod 335 mm
with 2 rods 670 mm

Rod diam. 14 mm
Weight 4.5 kg

Order-no. 00 50 00



Plate Stand PS300

for stationary work

also available in SS-version w.o. powder coated surface.

Universal Clamp UK 80

for fixing of vessels up to diameter 80mm



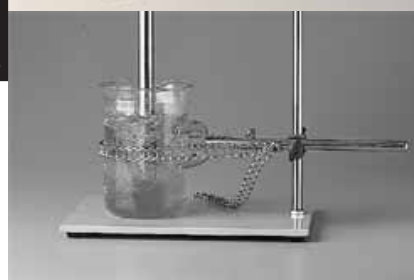
Spread 0-80mm
Rod length 150 mm
Rod diam. 12mm



Bosshead incl.
Order-no. 00 50 02

Chain length 1,000 mm
Rod length 250 mm
Rod diam. 12mm

Bosshead incl.
Order-no. 00 50 03



Chain Clamp KK 1000

for fixing of cylindrical vessels

Boss head KM17

for fixing of accessories and units on plate stand

"small version"



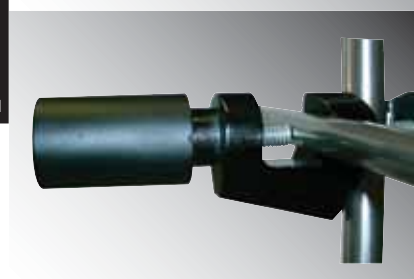
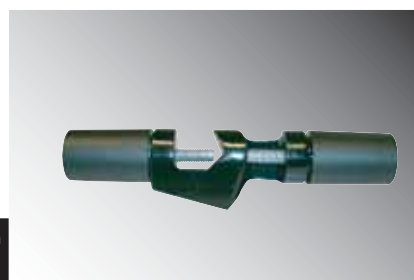
Max. rod diam. 17 mm



Order-no. 00 50 01

Max. rod diam. 20 mm

Order-no. 00 51 01



Boss head KM 20

for fixing of accessories and units on plate stand

"heavy duty version"



min./max. Volume 2- 10 ml
made of PP transparent

screw cap incl.
Order-no. 97 00 10

Tubes PPT 20

ART design. For an optimized homogenizing process. (patents pending)



Different sizes available:
150 ml; 500 ml; 1000 ml

Order-no. on request

Baffled Glasses

Special heavy duty Glassware.
for a quick, intensive and safe sample preparation.

Carrying cases NK2/AK1

made of robust plastic. A drive, tool and accessory carrying case including three different special foam padding trays -matching the variant you have chosen- .

NK2: Case for units main operated.
AK1: Case for battery system D-3/PA
delivery incl. foam inlays.
Order-no. NK2 00 51 00
Order-no. AK1 00 51 10



Timer ZU 1

for a precise adjustment of process time down to 1 sec.
Up to 4 devices connectable.

Dimensions 1sec. up to 99 h
110 x 65 x 200 mm
Order-no. 97 00 40



Adaptor KA 1

for ART-plastic tool DS-10/KS with a vice action latch.

Adaptor made of plastic.
Order-no. 97 00 30



Questionnaire

ART - moderne Labortechnik
Zienkener Str. 8a
D - 79379 Müllheim

Please copy, fill out and fax this questionnaire directly to: **+49-7631-700 99-99**

Name: _____ Phone: _____
Company: _____ Fax: _____
Address: _____ E-Mail: _____

Short description of procedure: _____

Basic product: liquid fraction in % _____ soild fraction in % _____
Initial Particle size: _____ mm desired particle size: _____ µm
Desired procedure: wet grinding emulsifying suspending
 homogenizing breaking up agglomerates aeration
 humidifying dissolving _____
 rapid mixing comminution
Volume: _____ ml and/or _____ l/h
Purpose of procedure: sample preparation further processing _____
Mode of operation: batch in-line cycle
Process viscosity: newtonian fluid plastic flow properties
 dilatant flow properties pseudoplastic flow properties
 thixotrope _____ mPa*s (20° C)
 like/comparable to _____ (e.g. honey, oil, water etc.)
Abrasivity: yes no
Hardness (in Mohs): 1 2 3 4 5 6 7 8 9 10
Corrosivity: yes no
pH value: pH- _____
Temperature range: _____ Grade Celsius
Pressure: yes _____ bar atmospheric
Vacuum: yes _____ mbar
Vessel dimensions: _____ ml or height x breadth x width - _____ mm
Filling height: _____ mm
Final product: _____
Personal remarks: _____
Planning horizon: <1 months 1 to 3 months 3 to 6 months >6 months

Application

Check

The MICCRA Series offer an unparalleled wide variety of potential applications in science, research, manufacturing and many other areas.

Check out the short list of markets where the MICCRA Serie is used with success.

Biotechnology/Human and animal genetics.
Human and veterinary medicine/Clinical medicine.
Food industry/Trophology.
Agricultural science/Breeding research.
Environmental Industry.
Pharmaceutical industry/Pharmacology/Toxicology.
Chemical industry.
Cosmetic industry.
Petrochemistry.
Paint and lacquer industry.
Fiber-, textile-, cellulose industry.

Please ask for more information for your market and application examples.

We gladly will support you in finding the right homogenizing system for your specific applications.

Access all areas with ART and make ...

a new twist
to
homogenizing



ART moderne Labortechnik

More products and accessories on request.
Please call your nearest agent or contact us directly.



Precious little sample...

100% Effectiveness.

The objective behind dispersing and homogenizing is to yield a most efficient size reduction of single components in a media. This procedure maximizes the surface of single droplets and particles which is an important step for a successful later on analysis. Short preparation times and finest Product qualities result from implementing the rotor/stator method from ART.

You get, e.g. finest grade emulsions with a correspondingly higher stability. Tissue samples are reduced within seconds to a pulp ready for analysis. Even hardly mixable substances do not clot but rather form very stable suspensions.

Effectiveness, right there where you need it. Even it concerns your daily routine work, or you are handling with precious sample materials.

As you know, sometimes you only have one try for a reliable, perfect cell disruption.

Take this chance with a MICCRA...

"... and are above average satisfied with the handling and the efficiency of the system. The yield and quality of the isolated RNA rose clearly; an aspect of tremendous importance, while there usually only one extraction attempt is possible..."

Institute for forensic medicine; Bonn



MICCRA - Homogenizing by ART



The MICCRA-System Concepts:

- Exclusively high rpm´s of up to 100,000 rpm
- 100 Watts to 30 kW engines also for large volumes and high viscosities
- Modular system for multiple applications
- Continuous variable rpm´s
- Fastest TOOL CHANGE system
- Volume ranges from 0.1 ml to 40t / h
- Light weights and compact sizes
- Smooth start motors
- Large safety switches

"Due to the very short operating time the sample material is heated up not too strong despite the high power, whereby all necessary parameters of the analyses remain genuine..."

Hoffman La-Roche AG; Basle

"If the pricing is competitive, this unit is a real winner".

Harvard University



You don't have the time of the world.

Tool change in record time.

The tool concept of ART.
Highly polished durable and robust 316L SS
are standard. The application range in
science, research and production is various.
The diassembly and tool change is very easy.

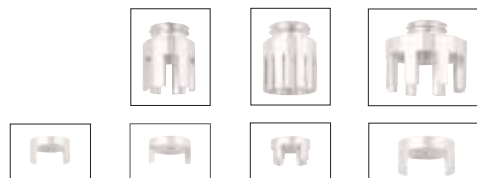
The MICCRA tools require only a few parts.
Shafts in four lengths, eight different Stators
and ten different Rotors fit to any of the
current lab drives.

By a unique variation more than 70 different
tool combinations are possible.

The modular system results in Cost savings
and frees up working space.

All elements can be assembled and disassembled
quickly without the use of separate tools. The
only requirement is a simple piece of cloth.

Where did you loose valuable time at your last
pit stop...?.



MICCRA - Homogenizing by ART

"We're there for you."

- **quality is our program**

extension of guarantee to 5 years

- **your personal consultancy**

call with your inquiries.

- **custom requirements**

full service in homogenizing. From small quantities up to plant sizes.

... call us with your requests



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