

# IMMERSION HOMOGENIZERS

## MICCRA - SERIES D

These high-speed homogenisers are ideal for all clinical and chemistry laboratory applications. Applications vary from homogenizing waste water samples to use in laboratory reactors, dispersion/homogenizing reactions, tissue break-up in diagnostic medical and clinical analyses and for suspensions such as those separated by centrifugation.

Light compact design, all motors can be hand-held

The powerful motors offer very high rotation speeds (e.g. 39,000 rpm in the case of the micra D-8) to reduce process times and product heating. Thus obtaining a high quality sample and small dimensions.

Automatic power surge protection extends motor life. A red pilot light indicates when the instrument is off (Micra D-13)

Safety switch for discontinuous and continuous operation; safety cut-out device interrupts high speed operation in the event of an emergency.

Comfortable and safe with easy start-up

Standard rods can be adapted to all combinations of stators.



# IMMERSION HOMOGENIZERS

## MICCRA D - 3/PA

Portable battery-operated homogeniser complete with battery charger. Designed especially for breaking up tissue in clinical /diagnostic analyses and for suspensions.

**Minimum battery durability 1/2 huor**



Technical Specifications		
Inlet power	W	350
Outlet power	W	200
Speed range	rpm	18.000 fixes
Speed adjustment	continuous	no
Electronic adjustment		no
Disturbance free, in compliance with EEC standards		EN 55014
Operating temperature	°C	+5+50
Humidity	%	85
Power surge indication		acustic
Power surge protection	thermal	no
Safety switch		no
Safety start-up		no
Dimensions Ø x H	mm	66 x 225
Motor weight	kg	1,6
<b>Item</b>		<b>632.1051.03</b>

V/Hz 12	SAFETY CLASS 2	PROTECTION RATING IP 20
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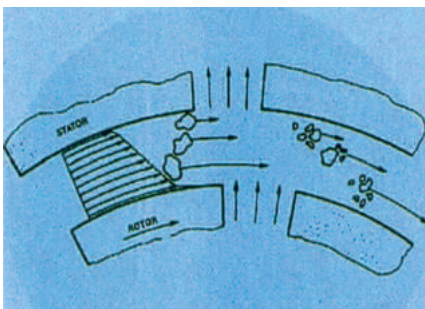
## MICCRA D - 1

Medium sized homogeniser but great flexibility, ideal for small volumes



Technical Specifications		
Inlet power	W	145
Outlet power	W	73
Speed range	rpm	5.000-35.000
Speed adjustment	continuous	yes
Electronic adjustment		Wave
Disturbance free, in compliance with EEC standards		EN 55014
Operating temperature	°C	+5 +45
Humidity	%	93
Power surge indication		acustic
Power surge protection	thermal	yes
Safety switch		yes
Safety start-up		yes
Dimensions Ø x H	mm	50 x 230
Motor weight	kg	0,800
<b>Item</b>		<b>632.1051.05</b>

V/Hz 230/50-60	SAFETY CLASS 2	PROTECTION RATING IP 20
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### The rotor – stator principle

Thanks to the high speed rotor the fluid treated is automatically pumped up through the dispersion head and then expelled radially through the slats between the rotor and stator. As the force of acceleration is high the material is subject to a high cutting and thrust forces. The high turbulence between the rotor and stator mixes the suspension thoroughly. An important factor to achieve perfect homogenisation is the product of the speed gradient modified by the length the particles remain in the cutting area. The optimum range of peripheral velocity of the rotor-stator ranges from 10 to 24 m/s.

# IMMERSION HOMOGENIZERS

## MICCRA D - 9

This hi-power homogeniser is ideal for all operations involving the grinding of dry or tendinous tissue and emulsifying.

Technical Specifications		
Inlet power	W	850
Outlet power	W	495
Speed range	rpm	11000-39000
Speed adjustment	continuous	yes
Electronic adjustment		wave
Disturbance free, in compliance with EEC standards	EN	55014
Operating temperature	°C	+5+50
Humidity	%	85
Power surge indication		acustic
Power surge protection	thermal	yes
Safety switch		yes
Safety start-up		yes
Dimensions Ø x H	mm	66x210
Motor weight	kg	1,4
<b>Item</b>		<b>632.1051.08</b>

V/Hz  
230/50-60

SAFETY  
CLASS  
2

PROTECTION  
RATING  
IP 20



## MICCRA D - 15

manca

Omogeneizzatore di elevata potenza. Ideale in laboratori ed impianti pilota, il motore è stato studiato appositamente per l'utilizzo di lunghi periodi, la regolazione integrata garantiscono una velocità costante anche in caso di variazione della viscosità

Technical Specifications		
Inlet power	W	1520
Outlet power	W	900
Speed range	rpm	8800-33600
Speed adjustment	continuous	yes
Electronic adjustment		wave with speed indicator
Disturbance free, in compliance with EEC standards	EN	55014
Operating temperature	°C	+5+50
Humidity	%	85
Power surge indication		visivo
Power surge protection	thermal	yes
Safety switch		yes
Safety start-up		yes
Dimensions Ø x H	mm	70x270
Motor weight	kg	2
<b>Item</b>		<b>632.1051.13</b>

V/Hz  
230/50-60

SAFETY  
CLASS  
2

PROTECTION  
RATING  
IP 20



# IMMERSION HOMOGENIZERS

## 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.

Field of use	Process	Sample volume	Tool
Biotechnology Medicine Food industry Pharmaceutical industry	Coarse crushing and final processing; preparation of emulsions and cell suspensions; shredding of human, animal, and plant tissues.	0,1-10 ml 1,0-100 ml	DS-5/K DS-8/P
Pharmaceutical chemistry Building materials industry Petrochemistry Environmental control	Standard equipment for coarse crushing of hard solids in a liquid..	100-5.000 ml 250-10.000 ml	DS-20/PG DS-30/PG
Waste water/sludge Medicine Food industry Paper/pulp industry Tobacco industry Environmental control	Coarse crushing and disruption of human, animal, and plant tissues.	100-5.000 ml 100-3.000 ml 250-10.000 ml	DS-20/PG SmR DS-20/PF SmR DS-30/PG SmR
Ceramics industry Dye and lacquer industry Metal working industry	Breaking up agglomerates intense mixing , preparing suspensions	100-5.000 ml. 250-10.000 ml.	DS-20/PG MiR DS-30/PG MiR
Waste water/sludge Dye and lacquer industry Leather industry Paper/pulp industry Pharmaceutical industry Environmental control	Standard equipment for crushing / pulverising of hard solids in a liquid, dispersing fine particles	100-3.000 ml. 250-8.000 ml.	DS-20/PF DS-30/PF
Waste water/sludge Biotechnology Medicine Food industry Paper/pulp industry Tobacco industry Textile industry	Standard equipment for final processing, sample preparation, and shredding of human, animal, and plant tissues.	100-3.000 ml 250-8.000 ml	DS-20/PF SmR DS-30/PF SmR
Ceramics industry Cosmetics industry Dye and lacquer industry Food industry Paper/pulp industry Petrochemistry	Standard equipment for final preparing emulsions, intense mixing	100-2.500 ml 250-7.000 ml	DS-20/PF MiR DS-20/PF EmR DS-30/PF MiR DS-30/PF EmR
Ceramics industry Food industry Environmental control	High-speed or intense mixing with less shearing effect.	250-20.000 ml 2.000-50.000 ml	RW-30/PG RW-40/PG

# ROD STATOR & ROTOR

FOR VOLUMES DA 0,1 - 100 ML

ROD STATOR  
AND ROTOR  
AND  
INCORPORATED  
CONTAINER  
DS-10/KS



ROTOR  
STATOR  
IN PLASTIC  
FOR SOFT  
TESSUES

ROD STATOR  
INCORPORATED  
AND ROTOR  
DS-5/K



ROTOR  
STATOR  
IN A UNIQUE  
PIECE

ROD STATOR  
INCORPORATED  
AND ROTOR  
DS-8/P

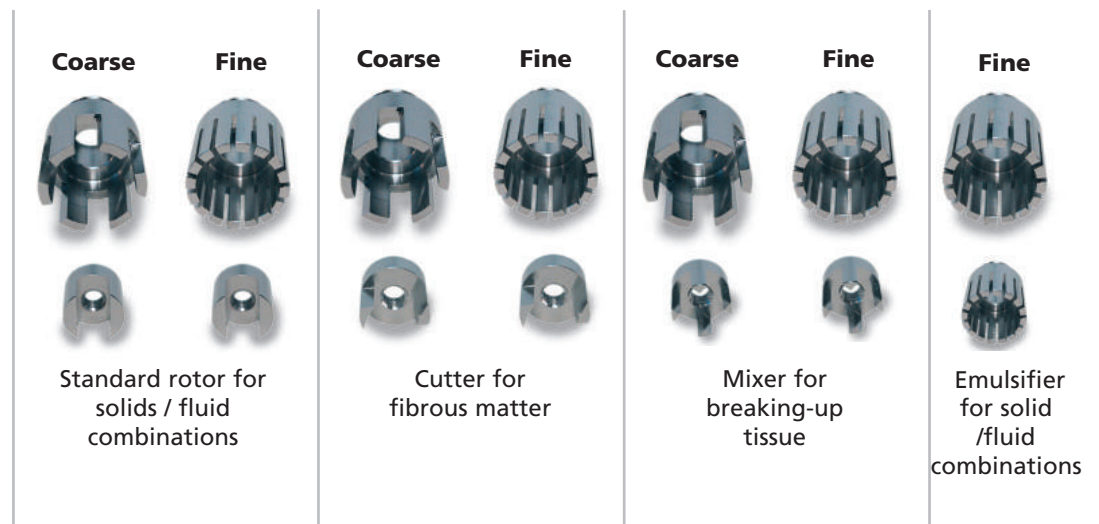


ROTOR  
STATOR  
IN A UNIQUE  
PIECE

Technical Specifications				
Recommended volume H <sup>2</sup> O	ml	5 - 10	0,1 - 20	1,0 - 100
Max. peripheral velocity	m/s	13,2	7,3	11,4
Ø rotor	mm	6,5	3,6	5,6
Ø stator	mm	10	5	8
Usable length of tool	mm	116	120	155
Max depth of immersion	mm	fixed tube	50	90
Hardness in "Mohs"	max	Plastic	6	6
Sterilization		no	yes	yes
Ø granules fibrous matter	mm	5 - 10	3	10
Ø granules hard and dry matter	mm	not recommended	0,5	3,5
<b>Item</b>		<b>632.1052.00</b>	<b>632.1052.04</b>	<b>632.1052.01</b>

# ROD STATOR & ROTOR

FOR VOLUMES DA 100 - 5.000 ML

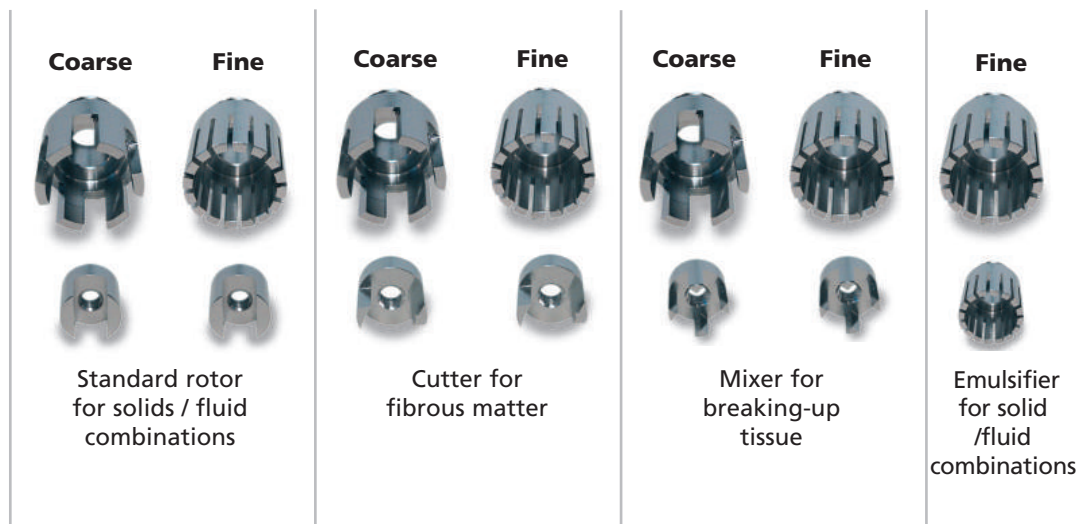


Technical Specifications		DS-20/PG	DS-20/PF	DS-20/PG SmR	DS-20/PF SmR	DS-20/PG MiR	DS-20/PF MiR	DS-20/PF EmR
Recommended volume H <sub>2</sub> O	ml	100 - 5.000	100 - 3.000	100 - 5.000	100 - 3.000	100 - 5.000	100 - 3.000	100 - 3.000
Max. peripheral velocity	m/s	30,6	30,6	30,6	30,6	30,6	30,6	30,6
Ø rotor	mm	15	15	15	15	15	15	15
Ø stator	mm	20	20	20	20	20	20	20
Usable length of tool	mm	250	250	250	250	250	250	250
Max depth of immersion	mm	200	200	200	200	200	200	200
Hardness in "Mohs"	max	6 6	6 6	6 6	6			
Sterilization		yes	yes	yes	yes	yes	yes	yes
Ø granules fibrous matter	mm			approx.100	approx. 50			
Ø gran. hard and dry matter	mm	approx. 8	approx.1,5			approx. 8	approx.1,5	max 1,5
<b>Item</b>		<b>632.1052.03</b>	<b>632.1052.09</b>	<b>632.1052.05</b>	<b>632.1052.11</b>	<b>632.1052.07</b>	<b>632.1052.13</b>	<b>632.1052.14</b>



# ROD STATOR & ROTOR

FOR VOLUMES DA 250 - 10.000 ML



Technical Specifications		DS-30/PG	DS-30/PF	DS-30/PG SmR	DS-30/PF SmR	DS-30/PG MiR	DS-30/PF MiR	DS-30/PF EmR
Recommended volume H <sub>2</sub> O	ml	250 - 10.000	250 - 8.000	250 - 10.000	250 - 8.000	250 - 10.000	250 - 8.000	250 - 8.000
Max. peripheral velocity	m/s	47	47	47	47	47	47	47
Ø rotor	mm	23	23	23	23	23	23	23
Ø stator	mm	30	30	30	30	30	30	30
Usable length of tool	mm	250	250	250	250	250	250	250
Profondità di immersione	mm	200	200	200	200	200	200	200
Hardness in "Mohs"	max	6	6	6	6	6	6	6
Sterilization	si	si	si	si	si	si	si	si
Ø granules fibrous matter	mm			approx.150	approx. 100			
Ø gran. hard and dry matter	mm	approx. 12	approx.1,5	approx. 12	approx.1,5	approx. 12	approx.1,5	max 1,5
<b>Item</b>		<b>632.1052.17</b>	<b>632.1052.23</b>	<b>632.1052.19</b>	<b>632.1052.25</b>	<b>632.1052.21</b>	<b>632.1052.27</b>	<b>632.1052.28</b>

# ROD STATOR & ROTOR

FOR LARGE VOLUMES FROM 20.000 - 50.000 ML



**1.000 to  
20.000 ml**



Mixer rotor  
for dispersing  
& mixing at  
high speed

**5.000 to  
50.000 ml**



Mixer rotor  
for dispersing  
& mixing at  
high speed

Technical Specifications		RW-30/PG	RW-40/PG
Recommended volume H <sub>2</sub> O	ml	1.000 - 20.000	5.000 - 50.000
Max. peripheral velocity	m/s	30,6	41
Ø rotor	mm	15	23
Ø stator	mm	30	40
Usable length of tool	mm	250	250
Max depth of immersion	mm	200	200
Hardness in "Mohs"	max	6	6
Sterilization		yes	yes
Ø granules fibrous matter	mm	100	150
Ø gran. hard and dry matter	mm	approx. 8	approx. 12
<b>Item</b>		<b>632.1052.15</b>	<b>632.1052.29</b>

## ACCESSORIES

Adapter for DS 10 KS  
**Item 632.1052.43**



Timer  
**Item 632.1052.42**





























Special test tube for DS 10 KS  
**Item 632.1052.44**





# ACCESSORIES HOMOGENISERS

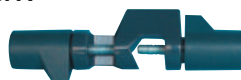
DS-20/PG	DS-20/PF	DS-20/PG SmR	DS-20/PF SmR	DS-20/PG MiR	DS-20/PF MiR	DS-20/PF EmR	RW-30/PG
							
Coarse 20 stator <b>Item 632.1052.80</b>	Stator 20 fine <b>Item 632.1052.82</b>	Coarse 20 stator <b>Item 632.1052.80</b>	Stator 20 fine <b>Item 632.1052.82</b>	Coarse 20 stator <b>Item 632.1052.80</b>	Stator 20 fine <b>Item 632.1052.82</b>	Stator 20 fine <b>Item 632.1052.82</b>	Coarse 30 stator <b>Item 632.1052.84</b>
							
Rotor 20 standard <b>Item 632.1052.60</b>		Rotor 20 knife <b>Item 632.1052.62</b>		Rotor 20 mixer <b>Item 632.1052.64</b>		Rotor 20 emulsifier <b>Item 632.1052.90</b>	Rotor 20 mixer <b>Item 632.1052.64</b>

DS-30/PG	DS-30/PF	DS-30/PG SmR	DS-30/PF SmR	DS-30/PG MiR	DS-30/PF MiR	DS-30/PF EmR	RW-40/PG
							
Coarse 30 stator <b>Item 632.1052.84</b>	Stator 30 fine <b>Item 632.1052.86</b>	Coarse 30 stator <b>Item 632.1052.84</b>	Stator 30 fine <b>Item 632.1052.86</b>	Coarse 30 stator <b>Item 632.1052.84</b>	Stator 30 fine <b>Item 632.1052.86</b>	Stator 30 fine <b>Item 632.1052.86</b>	Coarse 40 stator <b>Item 632.1052.88</b>
							
Rotor 30 standard <b>Item 632.1052.66</b>		Rotor 30 knife <b>Item 632.1052.68</b>		Rotor 30 mixer <b>Item 632.1052.70</b>		Rotor 30 emulsifier <b>Item 632.1052.92</b>	Rotor 30 mixer <b>Item 632.1052.70</b>

Chain pincer  
**Item 180.3070.89**



Clamp for homogeniser  
**Item 146.2900.41**



Clamp for pincer  
**Item 146.2900.05**



Steel rod  
Diam 12x600 mm  
**Item 263.7120.06**

Base 180 x 200 mm  
**Item 263.7122.37**

