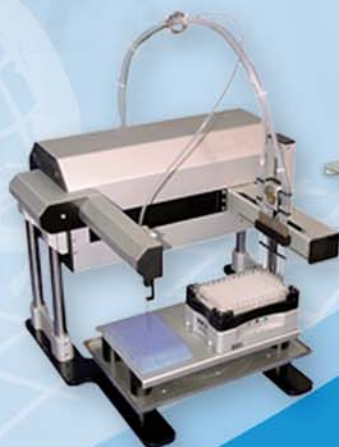


The logo for CAT, consisting of the letters 'CAT' in a bold, yellow, sans-serif font on a black rectangular background.

Ingenieurbüro  
M. Zipperer GmbH

*From marketing knowledge to real innovation*

# Product Overview



Ingenieurbüro **CAT**

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Telefax 076 36/78 03-45

info@cat-ing.de · www.cat-ing.de

# Overhead Stirring Motors



R 100CT



R 100C

brushless



R 20

pure power  
 up to 600 Ncm

## Stirring Motors

Unit	Description	Torque	Rpm	Part No.
R 100CT	The „bull“ of Ingenieurbüro CAT high torque stirring motors applies up to 600 Ncm torque at speeds of 10–500 rpm. Ideal for medium to high viscous media, 10,5 mm chuck, hollow shaft, µ-controller and alpha-numeric display of mechanic power, torque and timer, RS 232.	600	10–500	60314-00
R 100C	Powerful stirring motor 150 Ncm for laboratory and pilot-plant use, 10,5 mm chuck with hollow shaft, microprocessor, speed controlled and torque display, timer, RS 232.	150	40–2000	60218-00
R 100CL	Same as R 100C but with 250 Ncm torque and speed range of 30–1100 rpm.	250	30–1100	60315-00
R 100SD	General purpose laboratory use, same as above but with 4- digit LED speed readout. Max. torque 100 Ncm. Hollow shaft and precision chuck at 10.5 mm. <i>(Accessories: Special stand for all R 100 overhead stirrers Part No. 60494, special clamp, essential for all R 100 overhead stirrers Part No. 60495)</i>	100	40–2000	60313-00
R 80D	High torque stirrer 80 Ncm for lab use, clamping diameter 1–10.5 mm; stirring capacity 120 liters related to water, electronic speed control/display	80	20–700	60310-00
R 80PC	Same as R 80D, but with RS 232 interface	80	20–700	60311-00
R 50D	High torque stirrer, up to 50 Ncm torque, for lab use, hollow shaft, adjustable 10.5 mm chuck, electronic speed control/display	50	50–1600	60216-00
R 50	Same as R 50D, but without digital speed display	50	50–1600	60215-00
R 18	Laboratory stirrer, up to 18 Ncm torque, electronic feed-back control	18	100–2000	60214-00
R 60	Compact Overhead stirrer, up to 60 Ncm torque, speed range 20 - 700, 60W motor, keyless chuck (10 mm), hollow shaft to fasten tools up to 8 mm, 24V/DC power supply 100-240V/AC	60	20-700	60214-60
R 60PC	Same as R 60, but with RS 232 interface additional	60	20-700	60214-65
R 20	Compact Overhead stirrer, up to 20 Ncm torque, speed range 50 - 2000, 60W motor, keyless chuck (10 mm), hollow shaft to fasten tools up to 8 mm, 24V/DC power supply 100-240V/AC	20	50–2000	60214-50
R 20PC	Same as R 20, but with RS 232 interface additional	20	50–2000	60214-55
R 16	Small laboratory stirrer, brushless motor, hollow shaft , keyless chuck, to hold stirring paddles with a shaft diameter of 6 mm, weighs only 800 gramms	4	50-900	60213-50
R 14	Small laboratory stirrer, steplessly adjustable		100-2000	60213-40
R 2	Mini-stirrer, fixed speed, stainless steel stirring paddle		750	60212-00
R 1	Hand stirrer, battery-powered, for use with disposable stirring rods and special stainless steel stirring blades		3000	60211-00

# and Stirring Paddles

motors



Dissolver 60617-50



Part No.	Blade Stirrer	Length including blade	Diameter of rod	Diameter of blade
8B009404		400 mm	8 mm	70 mm
8B009408		500 mm	10 mm	70 mm
8B009504		400 mm	8 mm	70 mm
8B009508		500 mm	10 mm	70 mm

Part No.	Centrifugal Stirrer	Length including blade	Diameter of rod	Diameter of blade
8B009210		400 mm	8 mm	90/15 mm

Part No.	Propeller Stirrer	Length including blade	Diameter of rod	Diameter of blade
8B009100		300 mm	6 mm	50 mm
8B009103		300 mm	8 mm	50 mm
8B009104		400 mm	8 mm	50 mm
8B009105		500 mm	8 mm	50 mm
8B009110		400 mm	8 mm	70 mm
8B009114		500 mm	10 mm	100 mm
8B009000		300 mm	6 mm	50 mm
8B009004		400 mm	8 mm	50 mm
8B009010		400 mm	8 mm	100 mm

Part No.	Propeller Stirrer	Length including blade	Diameter of rod	Diameter of blade
8B009700		300 mm	6 mm	50 mm
8B009703		300 mm	8 mm	50 mm
8B009704		400 mm	8 mm	50 mm
8B009705		500 mm	8 mm	50 mm
8B009603		300 mm	8 mm	50 mm
8B009604		400 mm	8 mm	50 mm
8B009605		500 mm	8 mm	50 mm

Part No.		
60618-50	Stirring blade + shaft	
60619-00	Stirring blade	
60618-00	Stirring shaft $\varnothing$ 8x350	

Part No.		
60617-50	Dissolver + shaft	
60617-00	Dissolver $\varnothing$ 100	
60618-00	Dissolver shaft $\varnothing$ 8x350	

Part No.		
60494-00	U-Stand	
60495-00	Special clamp for R 100	
60709-00	Software for Windows PC-connecting cable	
60491-00	Pedestal Stand	
60492-50	Cross Over Clamp Steel	



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DIN EN ISO 9001:2000  
Zertifikat-Nr. 03006

# Homogenizers

Build your Dispersing system by selecting a motor plus one tool



## Homogenizers/Motors (Drive units)

Unit	Description	Rpm	Part No.
X 1740	High-power, heavy-duty drive motor with electronic speed control, 1500 watts for 40 mm tools	2500-22000	60408-00
Unidrive X 1000	Powerful drive motor, built-in speed control for all dispersing tools below up to 30 mm	4000-33000	60402-00
Unidrive X 1000D	Same as above but with digital speed display	4000-33000	60406-50
X 360	Drive motor, 360 watts, high speed motor, speed control separately available	45000	60401-00
P 1500	Speed control unit for X 360		60493-00
X 120	Hand-held, high speed drive motor for small volumes electronically stabilized Speed control for tools up to 17 mm	10000-33000	60404-00

## Homogenizer/Dispersing Tools (interchangeable all stainless steel)

Teeth per rotor/stator








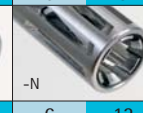



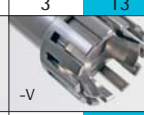

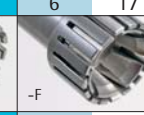


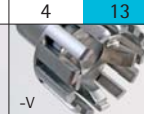


Volume	Dispersing tools*	Shafts		Rotor/Stator diam. (mm)		viscous V		low viscosity N		fine F		knife**M		Possible motors / max. v m/sec.
		diam. (mm)	length (mm)	V-rotor + V-stator = V-generator		F-rotor + V-stator = N-generator		F-rotor + F-stator = F-generator		M-rotor + M-stator = M-generator				
0,1 - 50	T 6/T 6 lang	6	105-170	4	6	2	7	4	7	4	11	2	7	X 120 X 360 Unidrive X 1000 Unidrive X 1000D 9,5
1 - 250	T 10	10	205	7,5	10	2	7	4	7	4	15	2	7	X 120 X 360 Unidrive X 1000 Unidrive X 1000D 17,5

\* T denotes Teflon bearing, G denotes ceramic seals \*\* Special knife generator for stringy and fibrous materials



### Homogenizer/Dispersing Tools (interchangeable all stainless steel)

Teeth per rotor/stator

Volume	Dispersing tools*	Shafts diam. (mm) length (mm)	Rotor/Stator diam. (mm)	viscous V V-rotor + V-stator = V-generator	low viscosity N F-rotor + V-stator = N-generator	fine F F-rotor + F-stator = F-generator	knife**M M-rotor + M-stator = M-generator	Possible motors motors / max. v m/sec.
5 - 1000	T 17	10 205	12,5 17	2 9	6 9	6 13	2 9	X 120 X 360 Unidrive X 1000 Unidrive X 1000D
<b>17</b>	 Part No.: 60426							
10 - 2000	T 20/G 20	20 265	15 20	2 9	6 9	6 13	2 9	X 360 Unidrive X 1000 Unidrive X 1000D
<b>20</b>	 Part No.: 60422/60423							
30 - 5000	T 30/G 30	20 255	25 30	3 13	6 13	6 17	3 13	Unidrive X 1000 Unidrive X 1000D
<b>30</b>	 Part No.: 60424/60425							
100 - 20000	T 40/G 40	20 360	33 42	4 13	8 13	8 23	4 13	X 1740
<b>40</b>	 Part No.: 60414/60415							

\*T denotes Teflon bearing, G denotes ceramic seals \*\* Special knife generator for stringy and fibrous materials

Tools	Description	Part No.
DK 30	Stainless steel, flow through chamber for shaft G 20 and G 30, flow 3000 ltr/h	60428-00
DK 40	Stainless steel, flow through chamber incl. motor and G 40, flow 5000 ltr/h	60429-00
AX 60	Analytical mill (use drive unit X 520 or Unidrive) stainless steel grinding chamber with separate cooling channels	60409-00

All tools are available for coarse, medium and fine grade and with special cutting knives. Please see detailed information in special leaflet "High efficiency Homogenizers".



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# Hotplate Stirrers and



## Hotplate Magnetic Stirrers

Unit	Description	Watts	Rpm	Temp	Part No.
MCS 66	Microprocessor controlled, LCD display, programmable multistep timer, safety temp., temp. ramps, RS 232, Eloxal hotplate, membrane keyboard, PT100 sensor	500	50-1600	40°-330°	60276-00
MCS 67	Same as above but with Ceran® hotplate	600	50-1600	40°-440°	60277-00
M 36	Microprocessor controlled, alpha-numeric LCD-display, Ceran hotplate, square 210 x 210 mm, halogen heating, connector for PT100 sensor, programmable timer and safety temp., RS 232 via adapter possible	1200	60-1100	40°-500°	60376-00
M 26G2	Microprocessor controlled, alpha-numeric LCD display, Eloxal hotplate 2 independant safety circuits, connector for PT100 sensor programmable: timer, safety temp., temp. ramp., RS 485 interface, (RS 232 via adapter possible)	500	60-1600	40°-360°	60279-00
M 21	Microprocessor controlled, 4 digit temp., speed, and time display, RS 485 interface, (RS 232 via adapter possible), temp.- control via PT100, soft start, safety features, stainless steel hotplate	500	60-1600	40°-350°	60361-00
M 22	Same as above but with Eloxal hotplate	500	60-1600	40°-380°	60362-00
M 23	Same as above but with Ceran® hotplate	600	60-1600	40°-500°	60363-00
M 11	Electronic feed-back speed control, stainless steel hotplate, KTA1	500	100-1600	40°-330°	60270-00
M 12	Electronic feed-back speed control, Eloxal hotplate, KTA1	500	100-1600	40°-330°	60271-00
M 13	Electronic feed-back speed control, Ceran® hotplate, KTA1	600	100-1600	40°-400°	60272-00
M 6	Electronic feed-back speed control, Ceran® hotplate	600	60-1600	40°-400°	60266-00
M 6.1	Electronic feed-back speed control, stainless steel hotplate	500	60-1600	40°-330°	60268-00
M 6.2	Electronic feed-back speed control, Eloxal hotplate	500	60-1600	40°-330°	60269-00
ECM 6	Compact low-energy stirrer, Eloxal hotplate, square 90 x 90 mm	160	10-1200	40°-250°	60256-00

KM 16.4D	Magnetic hotplate stirrer and bath heater for round-bottom flasks of 100, 250 or 500 ml, Microprocessor controlled, 4 digit temp., speed and time LED display, connector for PT-100 probe	500	60-1100	40°-450°	60357-00
KM 16.7D	Same as above but for round-bottom flasks of 1000, 2000 ml	500	60-1100	40°-450°	60358-00

<sup>1</sup> with connector for electronic and standard contact thermometer.

# Magnetic Stirrers



## Magnetic Stirrers (with stainless steel cases)

Unit	Description	max. Liters	Rpm	Part No.
M 30.30	Electronic feed-back speed control, volumes up to 100 liters	100	100 - 1100	60254-00
M 20.20	Electronic feed-back speed control, volumes up to 50 liters	50	100 - 1100	60253-00
M 15	Opto-electronic speed control	10	60 - 1600	60261-00
M 5	Stirrer with electronic feed-back speed control	10	60 - 1600	60265-00
ECM 5	Compact low-energy stirrer, electronic speed control	1	10 - 1200	60255-00
ECM 2	Compact stirrer for cell treatment, low speed range	1	2 - 200	60252-00
M 2	Small lightweight stirrer, fixed speed, pp - housing	1	500	60260-00

### Accessories for MCS 66, MCS 67, M 26, M 16.5, M 16.6 and M 17.5

PT100	Electronic temperature probe complete, probe diameter 3mm, total length 300 mm	60278-00
PT100 duplex	Duplex electronic temp. probe for M 26 only	60673-00

### Accessories for M 11, M 12, M 13

Electronical contact thermometer, digital and mercury free with Pt-1000 probe Length: 250 mm, temp. range: 50°C to 300°C	60664-00
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### Stirring Bars

Length:	Diameter:	Part No.
10 mm	6 mm	8b035009
20 mm	7 mm	8b035017
25 mm	7 mm	8b035020
30 mm	7 mm	8b035022
40 mm	7 mm	8b035024
50 mm	7 mm	8b035028
60 mm	7 mm	8b035031
80 mm	10 mm	8b035035
1 Set of stirring bars, Content: 12 pieces		8b000000

### Stirring Bar Extractor

Length:	Diameter:	Part No.
150 mm	10 mm	8b037202
200 mm	10 mm	8b037204
250 mm	10 mm	8b037206

Egg-shaped stirring bar for M 20.20 and M 30.30



# Hotplates and Heaters

(usual temperature range: 40 - 300°C thermostat controlled)



H 3.1



H 17.5D



H 3



H 30/30C



H 30D



H 4

## Heaters

Unit	Description	Watts	Part No.
H 17.5D	Microprocessor controlled, 4 digit temp., speed and time LED display, Ceran® hotplate, 135 x 135 mm connector for PT-100 probe, RT to 500°C	600	60228-00
H 3	Ceran® hotplate 135x135 mm	600	60223-00
H 3.1	Stainless steel hotplate Ø130 mm dia	500	60225-00
H 4	Sandbath for sand, oil or other fluids, 1 ltr st. steel bath	600	60224-00
H 30D	Microprocessor controlled, 4 digit temp., and time display, RS 232-via adapter possible, temp.- control via Pt-100, safety features, aluminium hotplate, RT to 380°C	2000	60226-50
H 30/30	Aluminium hotplate 300x300 mm	2000	60226-10
H 30/30C	Ceran® hotplate, otherwise same as H 30/30	2000	60226-30
H 30/45	Aluminium hotplate 300x450 mm	2000	60226-20
H 30/45C	Ceran® hotplate, otherwise same as H 30/45	2000	60226-40
H 60/30	Aluminium hotplate 600x300 mm	4000	60226-60
H 60/30C	Ceran® hotplate, otherwise same as H 60/30	4000	60227-70





# Shaking Heaters



SH 10 with "Deep Well" adapter



SK 10



SH 10



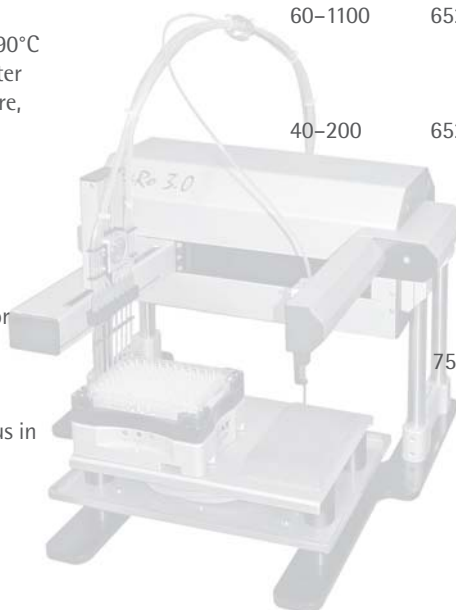
SH 26



## Shaking Heaters

Unit	Description	Frequency	Part No.
SH 26.2	Shaking heater for 4 microtiter plates, high precision temp. control from RT to 95°C in steps of 0.1°C Programmable over-temperature-cut-out. Optical control via a 2 x 16 character alpha-numeric LCD. Protection against unintended changes on set temperature, safety-temperature, switch-off timer, RS 232 and special indexing mechanism which stops platform always at defined position.	60-1100	65287-00
SH 26.3	µP controlled thermo shaker for 48 Eppendorf tubes of 1.5ml content, RT to 95°C, 3mm orbit.	60-1100	65287-30
SH 26.3	µP controlled thermo shaker for 48 Eppendorf tubes of 2.2ml content, RT to 95°C, 3mm orbit.	60-1100	65287-80
SH 26.4	Shaking and heating up to 160°C, 2 heating blocks for 24 reagent vessels of either 1.5 or 2ml.	60-1100	65287-40
SH 25	Shaking heater for microtiter plates, high precision temp. control from RT to 90°C Programmable over-temperature-cut-out. Optical control via a 2 x 16 character alpha-numeric LCD. Protection against unintended changes on set temperature, safety-temperature and switch-off timer.	40-200	65286-00
<i>Heating blocks for a great variety of microplates are available upon request.</i>			
SK 10	Cooling/Heating shaker via bath thermostat. Operating temperature range minus 5° to 95°C. Shaking frequency: 200 - 800 rpm		
SH 10	Modular shaking/heating unit with separate electronic control box suitable for automated applications. Operating temperature from RT to 95°C. Shaking frequency: 200 - 1.700 rpm, various models available upon request.		75580-xx

The size of both shakers is based on the "footprint" of a microtiter plate. Please contact us in case of special applications. Stand-alone versions will be available soon.





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# Shakers



## Shakers

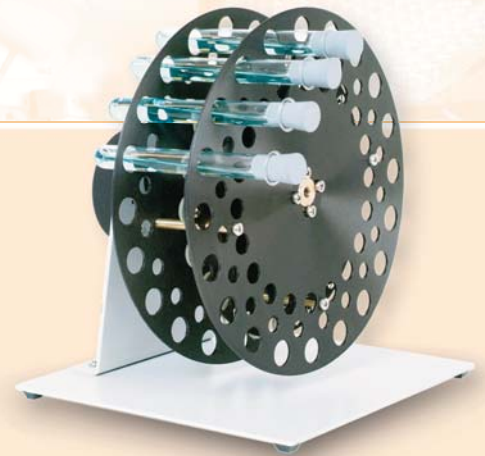
Unit	Description	Frequency	Part No.
S 25	Powerful shaker with linear reciprocate shaking motion, RS 232 interface for computer control, indexing mechanism, timer, 20mm amplitude. To be combined with various shaking adaptors	40-200	60385-00
S 26	Powerful shaker with horizontal shaking motion, RS 232 interface for computer control, indexing mechanism, timer, 3mm amplitude. To be combined with various shaking adaptors	60-1100	60386-00
S 50	Wrist-action shaker for up to 8 Erlenmeyer flasks of 500 ml each, feed-back speed control, 60 min timer	50-800	60285-00
S 20	Multi-use orbital shaker, electronic feed-back speed control, 3 mm amplitude, 0-60 min timer, 40 W, to be combined with the following shaking-adaptors	100-1100	60283-00
S 20D	Same as S 20 but with digital display and digital timer	100-800	60289-00

### S 20 Shaking Attachment:

E-	shaking-attachment for single hand held vessels		60683-00
S-	platform with adhesive mat, to hold petri dishes and similar items (200x400mm)		60684-00
V-	shaking-attachment for either 4 Erlenmeyer flasks or round-bottom flasks		60685-00
U-	universal shaking-attachment, two rubber rollers to hold Erlenmeyer flasks		60686-00
R-	test tube shaking-attachment to hold 36 test tubes of up to 16 mm o.d. variable from vertical to 45° inclination		60687-00
VM 2	Vortex mixer for up to 30 mm o.d. test tubes, continuous or touch operation, feed-back speed control	400-2800	60204-00
VM 3	Vortex mixer for up to 20 mm o.d. test tubes, continuous or touch operation, feed-back speed control	400-2800	60203-00
VM 4	Universal vortex mixer for test tubes, microcentrifuge tubes and microtiter plates, timer controlled or touch operation, feed-back speed control	400-2800	60208-00
ST 5	Bidimensional shaker, flat tray 410 x 340 mm, oscillation angle at 3, 6, 9 and 12°, electronic speed control	10-100	60281-00
ST 5D	Same as above but with digital display	10-100	60282-00
ST 3	Bidimensional shaker, flat tray 210 x 210 mm, oscillation angle at 5° or 7°. electronic speed control	5-50	60381-00
GM 3	Shaker with 3D-movement. Ideal for low foaming agitation as well as DNA extraction. Angular tilt: 5° and 7°. Platform dimension: 210 x 210 mm to hold Petri dishes, micro plates and other small containers. With digital display and built in timer: up to 99 hours	5-50	60382-00

# and Mixers

ST 5D



RT 60



S 20-U

RM 5 W-40



S 20-R

GM 3  
(ST 3 looks as GM 3)



### Accessories for Shaker S 25 and S 26

Shaking Adaptor for Erlenmeyer flasks, 6 flasks à 250 ml, 4 flasks à 500 ml

Shaking Adaptor for max. 4 separating funnels

Clamps for Erlenmeyer flasks: 25 ml, 50 ml, 100 ml, 250 ml, 500 ml

### Accessories for Shaker ST 3 and GM 3

Detachable platform

## Horizontal Mixers

Unit	Description	Watts	Rpm	Part No.
RM 5-40	5 rollers synchronous rocking and rotating tube mixer	25	35	60205-00
RM 5K-30	Same as RM 5-40, but shorter rollers	25	30	60205-10
RM 5-6	Same as RM 5-40, but slow speed	6	6	60206-00
RM 5-30V	Same as RM 5-40, but variable slow speed	25	1-30	60207-00
RM 5-80V	Same as RM 5-40, but variable high speed	25	10-80	60207-80
RM 5W-40	Same as RM 5-40 but with removable rollers	25	36	60205-30
RM 5W-30V	Same as RM 5-40 but with removable rollers and variable slow speed	25	1-30	60207-40
RM 5W-80V	Same as above but with removable rollers and variable high speed	25	10-80	60207-50
RM 10W-30V	10 removable rollers synchronous rocking and rotating tube mixer, variable slow speed	50	1-30	60207-10
RM 10W-80V	Removable rollers synchronous rocking and rotating tube mixer, variable high speed	50	10-80	60207-90
RT 20	Rotating and swaying mixer for 20 test tubes up to 15 mm o.d., exchangeable tube holders	6	6	60201-00
RT 60	Rotating and swaying mixer for 60 test tubes, 12, 15 and 18 mm o.d.	6	6	60202-00



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# Liquid Handling

Liquid processor

OEM pump



Contiburette  
μ 10H (μ20H)



Contiburette  
μ 10D



Liquid processor



## Dispensing Units

Unit	Description	Part No.
Liquid processor	System comprising a bottle-mounted dispensing unit for precise dispensing, pipetting, diluting, sampling and time controlled operations, microprocessor controlled, remoteable programming keypad, with 2 line a-numeric LCD display, RS 232 interface, handles volumes from 10 μl to 100 ltr. optional: remote dispensing hand-set.	60294-00 60715-00
Contiburette μ 10H	Contiburette, bottle top mounted electronic digital burette, hand operated version, <b>smallest dosing amount 10 μl</b> , calibration and adjustment facility, battery powered, LCD, thread adaptor A 32 with adapters for A 45 and A 28.	62723-00
Contiburette μ 20H	Contiburette, bottle top mounted electronic digital burette, hand operated version, <b>smallest dosing amount 20 μl</b> , calibration and adjustment facility, battery powered, LCD, thread adaptor A 32 with adapters for A 45 and A 28.	62724-00
Contiburette μ 1D	Contiburette, bottle top mounted electronic digital burette, motorized version, <b>smallest dosing amount 1 μl, max. flowrate 2 ml/min</b> calibration and adjustment facility, RS 485 interface, connection to PC with adaptor cable RS 485/RS 232 (to be ordered separately: PN 61703-00), LC display, thread adaptor A 32 with adapters for A 45 and A 28.	62730-00
Contiburette μ 10D	Contiburette, bottle top mounted electronic digital burette, motorized version, <b>smallest dosing amount 10 μl, max. flowrate 20 ml/min</b> calibration and adjustment facility, RS 485 interface, connection to PC with adaptor cable RS 485/RS 232 (to be ordered separately: PN 61703-00), LC display, thread adaptor A 32 with adapters for A 45 and A 28.	62732-00 62733-00
Contiburette μ 10DR	Contiburette μ10 D, additionally with integrated piston rinsing system.	
Contiburette μ 20D	Contiburette, bottle top mounted electronic digital burette, motorized version, <b>smallest dosing amount 20 μl, max. flowrate 30 ml/min</b> calibration and adjustment facility, RS 485 interface, connection to PC with adaptor cable RS 485/RS 232 (to be ordered separately: PN 61703-00), LC display, thread adaptor A 32 with adapters for A 45 and A 28.	62734-00 62735-00
Contiburette μ 20DR	Contiburette μ20 D, additionally with integrated piston rinsing system.	

# and Pumps

HPLH 1000VS



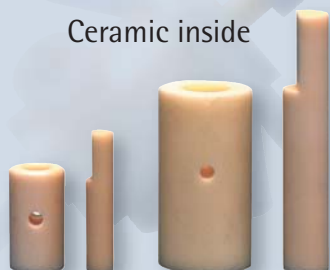
HPLH 200VCS

9 channel pump



HPLH 200PF

Ceramic inside



DP 200

## Pumps

Unit	Description	Part No.
<b>DOSCA micrometering pump HPLH PCON C with remotable controllers</b>		
HPLH 20V	High precision micrometering pump (ø 4 mm) encased in a coated steel housing, pump head stainless steel, wetted parts are AL <sub>2</sub> O <sub>3</sub> and PVDF or Tefzel, flow rate: 5 µl/min - 10 ml/min	70940-00
HPLH 20VS	Same as above but with rinse port, wetted parts: AL <sub>2</sub> O <sub>3</sub> and PVDF or Tefzel	70945-00
HPLH 20VCS	Same as above but with special rinse port inside ceramic cylinder, "wetted" parts: AL <sub>2</sub> O <sub>3</sub> and PEEK or PFA	70947-00
HPLH 200V	High precision micrometering pump (ø 6 mm) encased in a coated steel housing, pump head stainless steel, wetted parts are AL <sub>2</sub> O <sub>3</sub> and PVDF or Tefzel, flow rate: 50 µl/min - 100 ml/min	70950-00
HPLH 200VS	Same as above but with rinse port, wetted parts: AL <sub>2</sub> O <sub>3</sub> and PVDF or Tefzel	70955-00
HPLH 200VCS	Same as above but with special rinse port inside ceramic cylinder, "wetted" parts: AL <sub>2</sub> O <sub>3</sub> and PEEK or PFA	70957-00
HPLH 300VCS	Same as above (ø 8 mm), flow rate: 100 µl/min - 200 ml/min wetted parts are AL <sub>2</sub> O <sub>3</sub> and PEEK or PFA	70967-00
HPLH 1000V	High precision micrometering pump (ø 10 mm) encased in a coated steel housing, pump head stainless steel, wetted parts are AL <sub>2</sub> O <sub>3</sub> and PVDF or Tefzel, flow rate: 250 µl/min - 400 ml/min	70970-00
HPLH 1000VS	Same as above but with rinse port, wetted parts: AL <sub>2</sub> O <sub>3</sub> and PVDF or Tefzel	70975-00
HPLH 20PF	Pulse-free pump, flow rate: 5 µl/min-10 ml/min, wetted parts: AL <sub>2</sub> O <sub>3</sub> and Tefzel	70980-00
HPLH 200PF	Pulse-free pump, flow rate: 50 µl/min-100 ml/min, wetted parts: AL <sub>2</sub> O <sub>3</sub> and Tefzel	70985-00
<b>Multi channel pumps</b>	Consisting of 2 up to two 9 pump units in one housing. These systems are made upon customer request. Great variety of pump heads, also heatable, with different kinds of rinse ports available, dosing volumes from 1 µl/step up to 400 ml/min. Pump heads in stainless steel, or highly resistant plastics such as PEEK, PFA, PVDF or Tefzel. Pump systems made from high grade AL <sub>2</sub> O <sub>3</sub> . RS 232-interface and daisy chaining.	617xx-xx
<b>Lab pump</b>	Precise micrometering lab pump with digital flowrate control, flowrate up to 20 ml/min. Flow direction: Forward/Reverse.	
<b>DP 200</b>	3 sizes in different versions available. Please contact us for further information	6176x-00

# Blood Cell Counter



## Blood Cell Counter

Unit	Description	Part No.
DIFF 15	Compact, multi-function cell counter for manual differential counting procedures, e.g. bone, marrow, blood, 15 entry keys, % or real read out	60243-00
DIFF 15PC	Same as above but with RS 232 interface, including software to be used with Microsoft Windows®	60244-00

# XYZ Robot (OEM) and *Third Arm*™



*Third Arm*™



XYZ Robot



DSR

Dissolution Sampling Robot

## XYZ Robot

### Your application – our solution!

Please ask for our OEM XYZ machines. A tool changing device offers a variety of robotic handlings. Our product specialist will assist you with detailed information

## DSR

Our Dissolution Sampling Robot saves time and grants for reproducibility. Built-in pumps save a lot of bench space. For technical and product information please contact our product specialist.

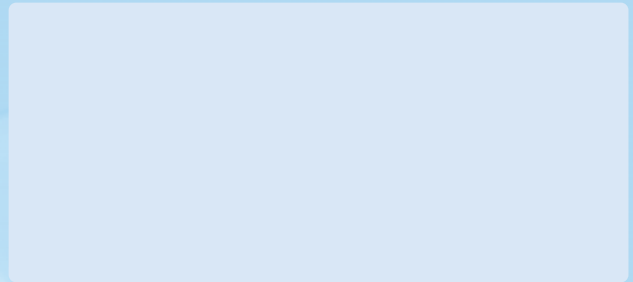


Your personal pipetting assistant fills tubes and vials with either a constant or variable amount of liquid(s). It also collects from preparative HPLC, Flash chromatography, leaching test and other fraction collection applications. ThirdArm and pump may be operated locally, or remotely, via a simple keypad or via PC. Contact our product specialist for detailed information.

## Interested?

Please feel free to browse and visit our website [www.cat-ing.de](http://www.cat-ing.de)

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