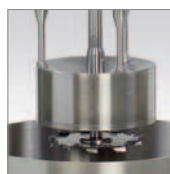


Laboratory and pilot plant dispersing and fine grinding

Power range 1.1 to 7.5 kW



DISPERMAT® LC
DISPERMAT® CN
DISPERMAT® AE
DISPERMAT® AE-EX



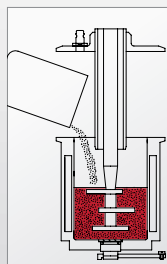
Innovation made in Germany: Modular Dispersing and Milling Systems

APS

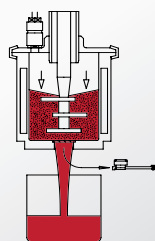
APS Milling System

Optional: Nano and ceramic version

When combined with the APS Milling System and a suitable impeller a DISPERMAT® laboratory dissolver is converted into a closed, batch bead mill.



The sliding cover is lowered to seal the milling container. The millbase is then dispersed.



On completion of the dispersion process, the sieve sealing plug is removed and the millbase is discharged from the milling container with the assistance of compressed air, leaving the beads behind.

APS system	millbase quantity*	container capacity	milling beads approx.
APS 250	60 - 110 ml	250 ml	100 ml
APS 500	110 - 210 ml	500 ml	200 ml
APS 1000	220 - 430 ml	1 litre	400 ml
APS 3000	650 - 1280 ml	3 litres	1200 ml
APS 5000	1000 - 2130 ml	5 litres	2000 ml
APS 7000	1500 - 3000 ml	7 litres	2800 ml

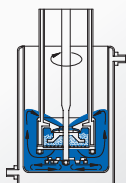


TML

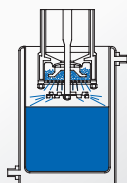
TML Basket Milling System

Optional: Nano, ceramic and vacuum version

The addition of the TML converts the DISPERMAT® into a closed basket milling system. Basket mills are extremely efficient grinding systems where a grinding basket is lowered into the millbase for dispersion. The rotating milling tool agitates the beads inside the basket which disperses the millbase. The dissolver disc, the basket and the patented pumping wheel generate effective circulation of the millbase, helping to provide excellent dispersion results in a short period of time.



Intense circulation of the product is generated with the dissolver disc and integrated pump wheel.



When the milling process is complete, the grinding basket is raised. Any product remaining in the basket is centrifuged out by briefly running the milling and dissolver disc.

TML system	millbase quantity*	container capacity	milling chamber
TML 1	500 ml - 3 litres	1, 2, 3, 5 litres	65 ml
TML 5	2.5 - 12 litres	5, 7, 10, 15 litres	185 ml
TML 10	3.5 - 25 litres	7, 10, 20, 30 litres	390 ml
TML 50	15 - 50 litres	30, 50, 70 litres	2.1 Liter

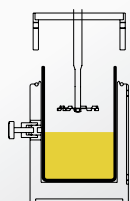


CDS

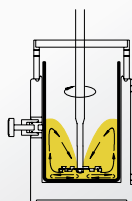
CDS Vacuum Dispersion System

Optional: Single or double walled container holder

The CDS dispersion system enables the dispersion process to be carried out in single walled containers, in a closed system under vacuum. The single walled containers are placed into the container holder and secured in place. The liquid and powder components are added and the glass cover lowered into place. The actual dispersion process can then be carried out under vacuum.



The single walled container is placed in the single or double walled container holder and the liquid and powder components are added.



After pre-mixing, the dispersion starts under vacuum. The dispersion process can be continuously monitored through the glass cover.

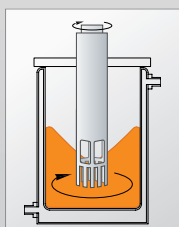


CDS system	product volume*	container size	container dimensions
CDS 250	200 ml	250 ml	dia.: 65 mm / height: 85 mm
CDS 500	400 ml	500 ml	dia.: 80 mm / height: 100 mm
CDS 1000	700 ml	1 litre	dia.: 100 mm / height: 130 mm
CDS 2000	1.5 litres	2 litres	dia.: 120 mm / height: 180 mm
CDS 3000	2.2 litres	3 litres	dia.: 140 mm / height: 200 mm
CDS 5000	3.5 litres	5 litres	dia.: 180 mm / height: 200 mm
CDS 10000	7 litres	10 litres	dia.: 240 mm / height: 240 mm
CDS 20000	15 litres	20 litres	dia.: 280 mm / height: 280 mm
CDS 25000	17 litres	25 litres	dia.: 320 mm / height: 320 mm

SR

SR 03/04 Rotor-Stator System

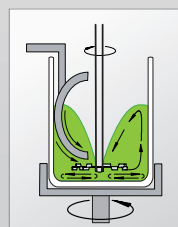
The SR rotor-stator system is a dispersion system for batch processing low viscosity products. The bearing free stator is an ideal flow breaker. It prevents rotation of the product and provides input of mechanical energy in a very concentrated area.



ASC

Scraper ASC for high viscosity products

In order to guarantee a perfect dispersion even with very high viscosity and non-flowing substances, very often a scraper system is absolutely essential. With the scraper system ASC the scraper arm is not guided in a circle within the container as usual but the firmly clamped container is rotating and the scraper arm stands still. The handling is very easy: the scraper system ASC is simply pushed into the stand and fixed with the central container clamping system.



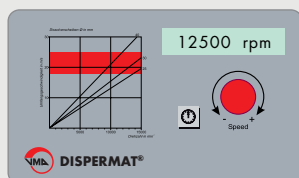
The modular dispersing system DISPERMAT®

Dispersing and fine grinding systems for laboratory and pilot plant
from 1.1 – 7.5 kW

Flexible. Powerful. Innovative.

- 3 ergonomic stand designs: BK2G, BK2 and BK3
- 24 drive variations: Three-phase A.C. motors with frequency converters
- 5 innovative control systems: LC, CN, C, M-EX and C-EX
- 5 adaptable accessory systems: APS, TML, CDS, SR and ASC

DISPERMAT® LC

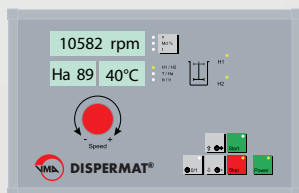


LC – Technology:

- adaptive turn sensitive speed adjustment
- digital speed indication
- timer function with digital display of the pre-selected time as well as the elapsed time

The DISPERMAT® LC is the entry level of our laboratory and pilot plant dissolvers. With the sturdy stand BK2G the height of the drive can be adjusted easily by a counter weight.

DISPERMAT® CN

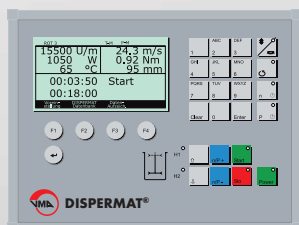


CN – Technology:

- infinitely speed adjustment
- display of speed, torque, timer and product temperature
- control for the innovative height adjustment system (Ha, H1, H2)

The comfortable control of the DISPERMAT® CN shows all key operating parameters during the dispersion. Thus, for example the adjusted height of the dissolver disc within the dispersing container is permanently displayed digitally. The height adjustment of the drives of the stands BK2/BK3 is done electrically.

DISPERMAT® AE



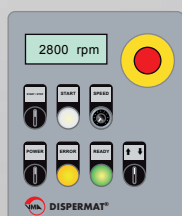
C – Technology:

- display of speed, torque, timer, product temperature, power input and much more.
- recording of all applied parameters
- definition of cut out values for torque, speed, product temperature and power input possible
- data interface for documentation and analysis
- ten preset database parameter sets can be created, edited and saved

The DISPERMAT® AE is fitted with an extensive process control as well as with a possible connection to a PC.

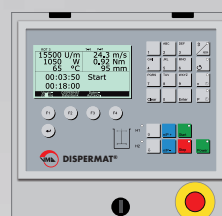
The stands BK2 and BK3 are easy to operate by the control and different height settings can be saved.

DISPERMAT® AE-EX



M-EX – Technology:

- infinitely speed adjustment
- digital speed indication
- explosion proof according to ATEX
- electrical height adjustment



C-EX – Technology:

The DISPERMAT® AE-EX is also available with the explosion proof C-technology. Power and function range see above.





Stand BK3 with C-technology



Stand BK2 with CN-technology
and the adaptable basket mill TML

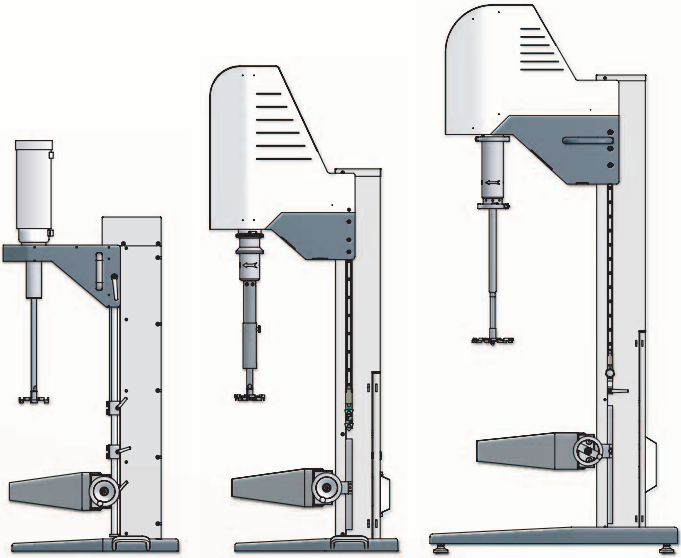
New high-quality stands of functional design made by VMA-GETZMANN.

Now available for particularly powerful drives up to 7.5 kW.

Robust. Precise. Functional.

The new stands BK2 and BK3 have a solid and very robust design. They are equipped with the latest technology and they are convincing by a functional design. For the electrical height adjustment of the dissolver drive, the stands are fitted with high-quality, wear-resistant linear guidances (BK2 and BK3). The torsion free executed motor console supports the quiet and

accurate operation of the dissolver shaft. The safety technology according to machine directive 2006/42/EG integrated in the stands and the linear technology are protected by coverings and therefore they are also suitable for the harsh production operation. The central container clamping system is height adjustable in front of the column.



stand	height adjustment	clamping range	dimension
stand BK2G	mechanical	10 – 37 cm	65 x 55 x 140 cm
stand BK2**	electrical	5 – 37/55 cm	65/80 x 55/70 x 160/210 cm
stand BK3	electrical	20 – 60 cm	110 x 105 x 230 cm

** the stand BK2 is available as a table or a floor model

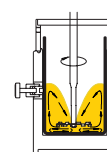
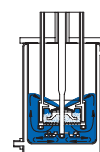
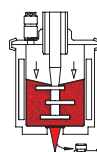
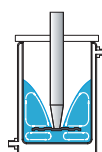


Stand BK2G with LC-technology



Overview of the modular dispersing system DISPERMAT®

Innovation made in Germany: modular Dispersing and Milling Systems



	DISPERMAT® type	control panel	power kW	speed rpm	torque Nm	stand	dissolver litre	bead mill APS type	basket mill TML type	vacuum system CDS type
DISPERMAT® LC	LC110-12	LC	1.1	0 - 12000	1.8	BK2G	0.5 - 10	APS 250 - APS 1000	TML 1	CDS 250 - CDS 25000
	LC110-6	LC	1.1	0 - 6000	3.6	BK2G	1.5 - 15	APS 250 - APS 1000	TML 1	CDS 250 - CDS 25000
	LC220-12	LC	2.2	0 - 12000	3.6	BK2G	0.5 - 20	APS 250 - APS 3000	TML 1 - TML 5	CDS 250 - CDS 25000
	LC220-6	LC	2.2	0 - 6000	7.2	BK2G	1.5 - 25	APS 250 - APS 5000	TML 1 - TML 5	CDS 250 - CDS 25000
	LC300	LC	3	0 - 6000	10	BK2G	1.5 - 30	APS 250 - APS 5000	TML 1 - TML 10	CDS 250 - CDS 25000
	LC400	LC	4	0 - 6000	13.7	BK2G	1.5 - 40	APS 250 - APS 7000	TML 1 - TML 10	CDS 250 - CDS 25000
DISPERMAT® CN	CN50	CN	3	0 - 6000	10	BK2	1.5 - 30	APS 250 - APS 5000	TML 1 - TML 10	CDS 250 - CDS 25000
	CN60	CN	4	0 - 6000	13.7	BK2	1.5 - 40	APS 250 - APS 5000	TML 1 - TML 10	CDS 250 - CDS 25000
	CN70	CN	2.2	0 - 3000	15	BK2	5 - 55	APS 250 - APS 5000	TML 5 - TML 10	CDS 250 - CDS 25000
	CN80	CN	4	0 - 3000	27	BK2	5 - 100	APS 250 - APS 7000	TML 5 - TML 10	CDS 250 - CDS 25000
	CN90	CN	5.5	0 - 3000	37	BK3	10 - 120	APS 1000 - APS 7000	TML 5 - TML 50	CDS 1000 - CDS 25000
	CN100	CN	7.5	0 - 3000	50	BK3	10 - 120	APS 1000 - APS 7000	TML 5 - TML 50	CDS 1000 - CDS 25000
DISPERMAT® AE	AE07	C	3	0 - 6000	10	BK2	1.5 - 30	APS 250 - APS 5000	TML 1 - TML 10	CDS 250 - CDS 25000
	AE08	C	4	0 - 6000	13.7	BK2	1.5 - 40	APS 250 - APS 5000	TML 1 - TML 10	CDS 250 - CDS 25000
	AE09	C	2.2	0 - 3000	15	BK2	5 - 55	APS 250 - APS 7000	TML 5 - TML 10	CDS 250 - CDS 25000
	AE10	C	4	0 - 3000	27	BK2	5 - 100	APS 250 - APS 5000	TML 5 - TML 10	CDS 250 - CDS 25000
	AE11	C	5.5	0 - 3000	37	BK3	10 - 120	APS 1000 - APS 7000	TML 5 - TML 50	CDS 1000 - CDS 25000
	AE12	C	7.5	0 - 3000	50	BK3	10 - 120	APS 1000 - APS 7000	TML 5 - TML 50	CDS 1000 - CDS 25000
DISPERMAT® AE-EX	AE01-EX	M-EX / C-EX	0.55	0 - 10000	1	BK2	0.5 - 6	APS 250 - APS 1000	TML 1	CDS 250 - CDS 5000
	AE02-EX	M-EX / C-EX	0.55	0 - 6000	1.8	BK2	1.5 - 8	APS 250 - APS 1000	TML 1	CDS 250 - CDS 5000
	AE03-EX	M-EX / C-EX	1.1	0 - 10000	2	BK2	0.5 - 11	APS 250 - APS 1000	TML 1	CDS 1000 - CDS 25000
	AE04-EX	M-EX / C-EX	2.2	0 - 10000	4	BK2	0.5 - 20	APS 250 - APS 3000	TML 1 - TML 5	CDS 1000 - CDS 25000
	AE05-EX	M-EX / C-EX	1.1	0 - 6000	3.7	BK2	1.5 - 15	APS 250 - APS 1000	TML 1	CDS 1000 - CDS 25000
	AE06-EX	M-EX / C-EX	2.2	0 - 6000	7.4	BK2	1.5 - 25	APS 250 - APS 3000	TML 1 - TML 5	CDS 1000 - CDS 25000
	AE07-EX	M-EX / C-EX	3	0 - 6000	10	BK2	1.5 - 30	APS 250 - APS 3000	TML 1 - TML 10	CDS 1000 - CDS 25000
	AE08-EX	M-EX / C-EX	4	0 - 6000	13.7	BK2	1.5 - 40	APS 250 - APS 5000	TML 1 - TML 10	CDS 1000 - CDS 25000
	AE09-EX	M-EX / C-EX	2.2	0 - 3000	15	BK2	5 - 55	APS 250 - APS 5000	TML 5 - TML 10	CDS 1000 - CDS 25000
	AE10-EX	M-EX / C-EX	4	0 - 3000	27	BK2	5 - 100	APS 250 - APS 7000	TML 5 - TML 10	CDS 1000 - CDS 25000
	AE11-EX	M-EX / C-EX	5.5	0 - 3000	37	BK3	10 - 120	APS 1000 - APS 7000	TML 5 - TML 50	CDS 1000 - CDS 25000
	AE12-EX	M-EX / C-EX	7.5	0 - 3000	50	BK3	10 - 120	APS 1000 - APS 7000	TML 5 - TML 50	CDS 1000 - CDS 25000

* Product volumes are based on medium viscosity. The actual volume may differ depending on the flow behaviour of the product.

DISPERMAT® and TORUSMILL®



Our experience – your advantage:

Please visit us in our excellently equipped laboratory and pilot plant for a personal product demonstration with your own products. Our skilled engineers will be pleased to show you the impressive range of services of our patented dispersing and grinding systems DISPERMAT® and TORUSMILL®.

Alternatively we would be pleased to receive a sample of your product for dispersing or fine grinding.

Please get in contact by phone: **+49 2296 - 8030**



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