

FREWITT

YOU THINK IT'S IMPOSSIBLE? TOGETHER, WE'LL DO IT!

for R&D and Institutions

WE CARE ABOUT YOU

WWW.FREWITT.COM



FLEXMILL-LAB

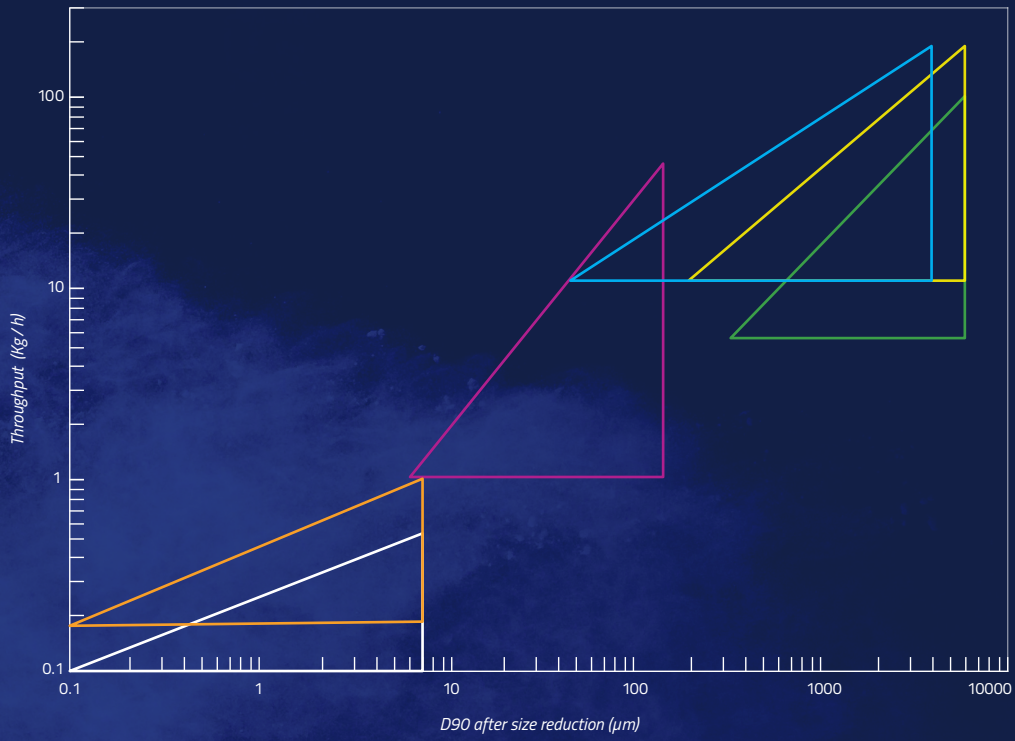
NW, PM-160, HW-1, CW-50, SW-50 & OW-1

FREWITT, world leader in the powder size reduction sector, is committed to supporting R&D labs, pharmaceutical institutions and technical training centers. Assisting closely our insitutional partners to achieve their process and developmental goals.

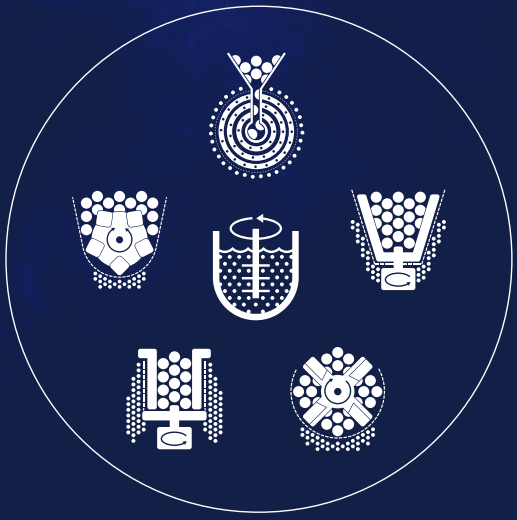
FlexMill-Lab, with its technical characteristics and unrivaled modularity (1 equipment, 6 heads) is the ideal tool for the development of your processes and various product researches.

With Frewitt, save time, space and money while increasing process and product knowledge.

PRODUCT RANGE



- FlexMill-Lab **NW-100**
- FlexMill-Lab **NW-250**
- FlexMill-Lab **PM-160**
- FlexMill-Lab **OW-1**
- FlexMill-Lab **CW-150**
- FlexMill-Lab HW-1



FLEXMILL-LAB NW

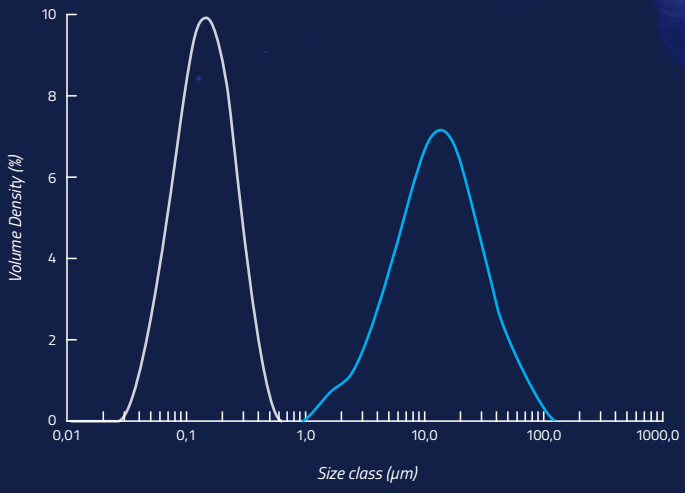
The FlexMill-Lab NW is high-performance bead mill engineered specifically for wet nano milling of pharmaceutical products.

Product	D50 / D90 before milling	Mill	D50 / D90 after milling	Throughput
Naproxen	13µm/39µm	FlexMill-Lab NW-100	144nm /298nm	75 g*/h
Rutin	3µm/10µm	FlexMill-Lab NW-100	178nm/371nm	8.5 g*/h
Lithium manganese oxide	14µm/46µm	FlexMill-Lab NW-100	113nm/327nm	5 g*/h

*Weight of solid

Test product:
Naproxen

Sample name	Before milling	After milling
Dx (10) (µm)	4.19	0.0665
Dx (50) (µm)	13.2	0.144
Dx (90) (µm)	39.2	0.298



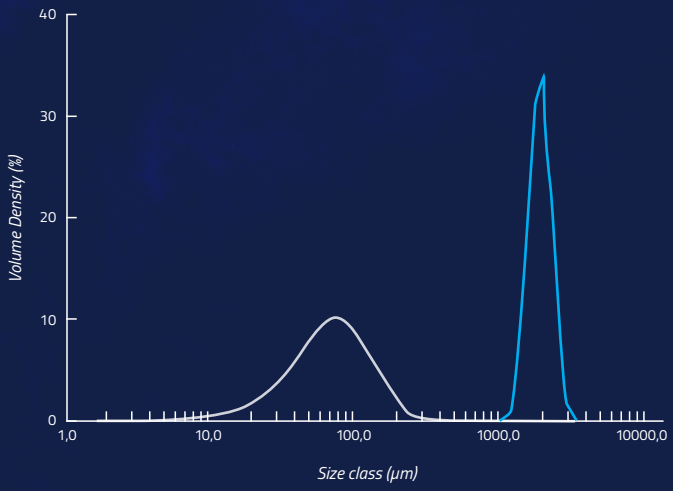
FLEXMILL-LAB PM-160

The FlexMill-Lab PM-160 is a high-performance pin mill designed for pulverizing hard or crystalline products.

Product	D50 / D90 before milling	Mill	D50 / D90 after milling	Throughput
PLGA	1890µm/2340µm	FlexMill-Lab PM 160/ Cryogenic	67µm/138µm	9 kg/h
Diclofenac sodium	15µm/57µm	FlexMill-Lab PM 160	2.7µm/7.1µm	3 kg/h
DuPont Polymer pellets	4mm/5mm	FlexMill-Lab PM 160/ Cryogenic	114µm/312µm	1.2 kg/h

Test product:
PLGA

Sample name	Before milling	After milling
Dx (10) (µm)	1510	26.1
Dx (50) (µm)	1890	67.3
Dx (90) (µm)	2340	138



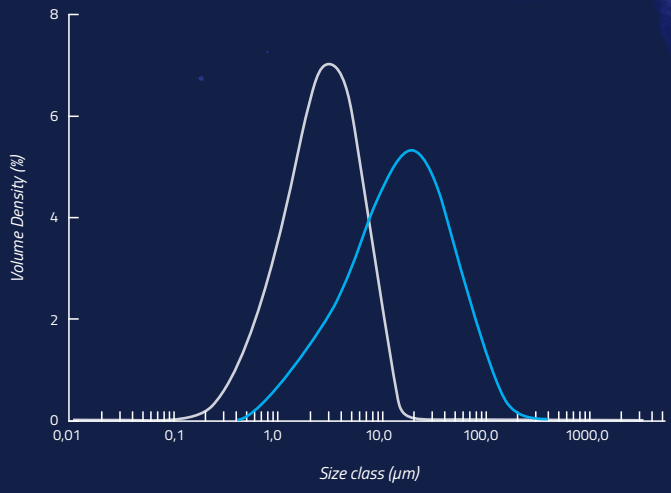
FLEXMILL-LAB PM-160

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PLGA	1890µm/2340µm	FlexMill-Lab PM 160/ Cryogenic	67µm/138µm	9 kg/h
Diclofenac sodium	15µm/57µm	FlexMill-Lab PM 160	2.7µm/7.1µm	3 kg/h
DuPont Polymer pellets	4mm/5mm	FlexMill-Lab PM 160/ Cryogenic	114µm/312µm	1.2 kg/h

Test product:
Diclofenac sodium

Sample name	Before milling	After milling
Dx (10) (µm)	2,72	0,79
Dx (50) (µm)	15,2	2,67
Dx (90) (µm)	57,4	7,06



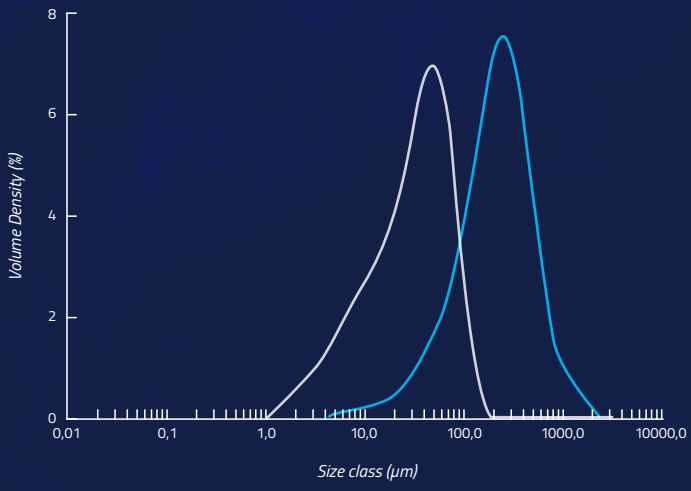
FLEXMILL-LAB HW-1

The FlexMill-Lab HW-1 is a high-performance hammer mill, designed for the milling and pulverization of hard, crystalline, as well as fibrous products.

Product	D50 / D90 before milling	Mill	D50 / D90 after milling	Throughput
Taurine	222µm/652µm	FlexMill-Lab HM-1	31µm/81µm	20 kg/h
Hydroxypropyl Methylcellulose	258µm/555µm	FlexMill-Lab HM-1	142µm/309µm	8 kg/h
Brivaracetam	1090mm/2250mm	FlexMill-Lab HM-1	167µm/432µm	13 kg/h

Test product:
Taurine

Sample name	Before milling	After milling
Dx (10) (µm)	59.3	4.17
Dx (50) (µm)	222	30.9
Dx (90) (µm)	652	80.5



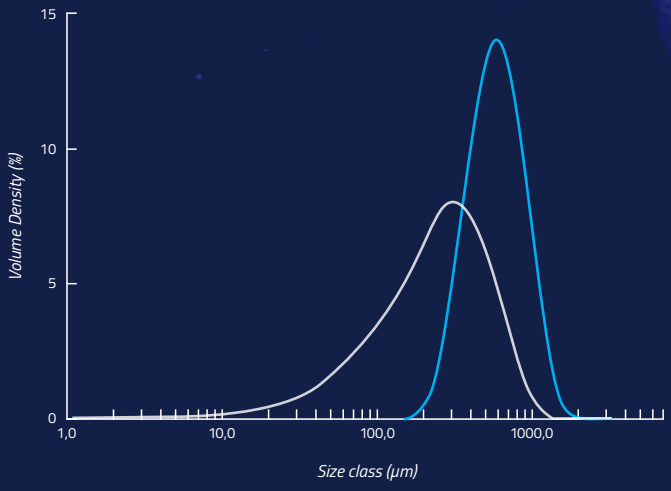
FLEXMILL-LAB CW-50

The FlexMill-Lab CW-50 is a high-performance, conical sieve mill that is used for the sizing and des-agglomerating of all types of dry and wet powder products.

Product	D50 / D90 before milling	Mill	D50 / D90 after milling	Throughput
Tripotassium Citrate	580µm/972µm	FlexMill-Lab CW-50	248µm/578µm	40 kg/h
Glucagon	17µm/47µm	FlexMill-Lab CW-50	17µm/47µm	25 kg/h
Ethyl cellulose	2 mm/4mm	FlexMill-Lab CW-50	647µm/1172µm	61 kg/h

Test product:
Tripotassium Citrate

Sample name	Before milling	After milling
Dx (10) (µm)	336	64.4
Dx (50) (µm)	580	248
Dx (90) (µm)	972	578



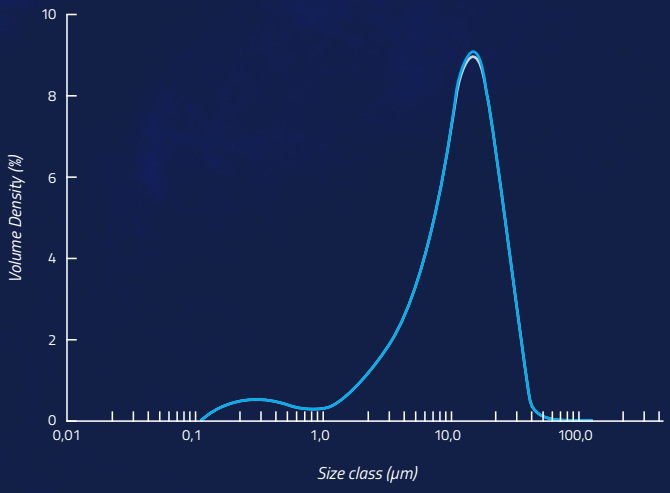
FLEXMILL-LAB SW-50

The FlexMill-Lab SW-50 is a cylindrical mill with a rotating sieve drum designed for the des-agglomeration and homogenisation of all types of dry and wet powders.

Product	D50 / D90 before milling	Mill	D50 / D90 after milling	Throughput
Magnesium stearate	7µm /35µm	FlexMill-Lab SW-50	7 µm/35µm	32 kg/h
Tenapanor Hydrochloride	11µm/24µm	FlexMill-Lab SW-50	11µm/24 µm	18 kg/h
Lactose monohydrate	195µm/397µm	FlexMill-Lab SW-50	194µm/387µm	34 kg/h

Test product:
Tenapanor Hydrochloride

Sample name	Before de-agglomeration	After de-agglomeration
Dx (10) (µm)	2.45	2.45
Dx (50) (µm)	11.4	11.4
Dx (90) (µm)	24.0	23.8



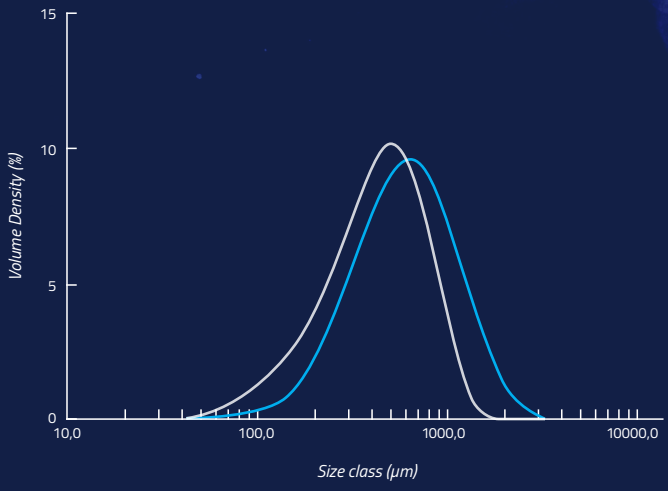
FLEXMILL-LAB OW-1

The oscillating and rotating FlexMill-Lab OW-1 sieve mill is designed for the milling of difficult-to-process, as well as heat-sensitive products requiring uniform particle-size distribution.

Product	D50 / D90 before milling	Mill	D50 / D90 after milling	Throughput
Sodium bicarbonate	595µm/1270µm	FlexMill-Lab OW-1	426µm /835µm	20 kg/h
Cannabis	6mm/10mm	FlexMill-Lab OW-1	646µm/941µm	3 kg/h
Carrot flavoring	2mm/5mm	FlexMill-Lab OW-1	136µm/382µm	13 kg/h

Test product:
Sodium bicarbonate

Sample name	Before milling	After milling
Dx (10) (µm)	252	149
Dx (50) (µm)	595	426
Dx (90) (µm)	1270	835



FlexMill-Lab NanoWitt Lab



FlexMill-Lab Pin Mill-160



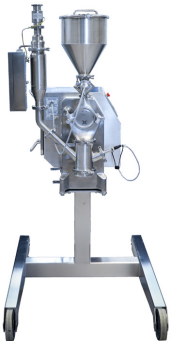
On a mobile stand



Isolator intergration with active inertisation and oxygen control option

FlexMill-Lab HW-1





With a ProFi-Clean
(possibility to add some modules)



In addition to a lab-scale mills, customers also order production-scale machines from Frewitt. Frewitt satisfies your requirements, from lab, to pilot, to production, always ensuring complete scalability.

FlexMill-Lab OW-1



Machine equipped with transformer, for one of our US customers



Customized mobile skid



Customized mobile stand



Compact table machine

WORLDWIDE PRESENCE



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