

# AUSMILL Series Mill



AUSTAR

Formulation



AUSTAR is a technology-based pharmaceutical engineering solution provider with deep understanding of pharmaceutical industry regulations and processes. Integrating global high-quality resources and being committed to helping clients improve pharmaceutical process and operational effectiveness. Through boosting global drug safety and efficacy to protect and promote human health.

AUSMILL series mills, AUSTAR's self-developed products, are widely applied in pharmaceutical, food, and chemical industries by virtue of the leading technologies in milling, sieving, dispersing, and mixing areas.

AUSMILL includes three series of products, i.e. HMA series hammer mills, CMA series conical mills, and SCMA series centrifugal sieving mills. It is your best choice for all processes of solids crushing, sieving, and milling!

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# HMA Series Hammer Mill

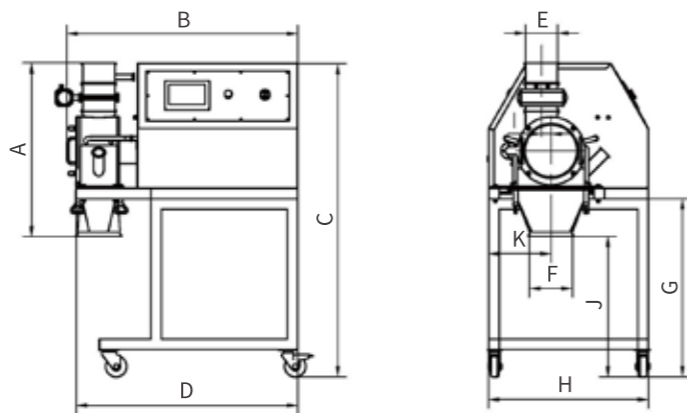
## Product Introduction

HMA series hammer mill is designed for grinding various hard and tough materials by impacting crush force, and is applicable to grind most materials in medical, food, and fine chemical fields.




## Structure Description

- ▶ HMA series hammer mill uses Siemens control system, which can control the target particle sizes by adjusting the feeding speed, rotor rpm, and mesh number.
- ▶ After being fed into the milling chamber, the materials are milled through the cutting of high speed rotating mill knife, friction and collision between materials.
- ▶ Star feed valve is used to control the feeding speed and effectively prevent dust generation during the milling process. The rotor can rotate reversely. The impacting side is used for milling hard and crystalline materials and the cutting edge is used for milling tough materials.
- ▶ Different sizes of screens can satisfy the particle size requirements. Mesh type: round, square, and conidur. Screen mesh size range: 0.2 to 10mm.




Model	A	B	C	D	E	F	G	H	I	J
HMA270	830	1100	1550	1055	φ152.4	φ203.2	760	45	730	296
HMA390	965	1190	1550	1150	φ152.4	φ203.2	870	75	650	830

## Product Feature




Feeding valve of dust-proof design for the accurate control of the feeding speed.

01



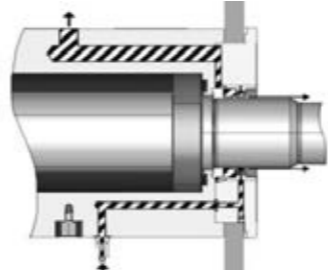
Front opening door of total access design, with the rotor easy to replace and clean.

02



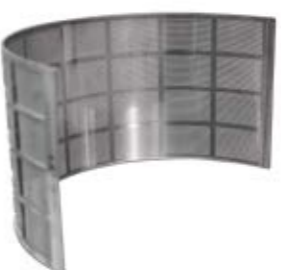
Material temperature rise being controlled by the chamber cooling device.

03




Continuous and long time operation of bearing cooling device.

04



Multiple screens available for effectively controlling particle size, with large opening rate for increasing the milling efficiency.

05



CIP/SIP realizable to satisfy the cleaning validation requirement.

06

## Technical Parameter

Model	HMA-150	HMA-270	HMA-390
Capacity	~300kg/h	~1200kg/h	~5000kg/h
Electricity	380V-50Hz	380V-50Hz	380V-50Hz
Rotating speed	Max.6000rpm	Max.6000rpm	Max.4500rpm
Power	1.1kW	4.0kW	5.5kW
Weight	50kg	420kg	470kg
Dimensions	780*440*775mm	1100*760*1550mm	1190*870*1550mm
Screen mesh	0.2-10mm		
Rotor	HMA150 rotor consists of 18 blades. HMA270 rotor consists of 24 blades. HMA390 rotor consists of 28 blades.		
Remark	The production capacity depends on the material characteristics and target particle size distribution.		

# CMA Series Cone Mill

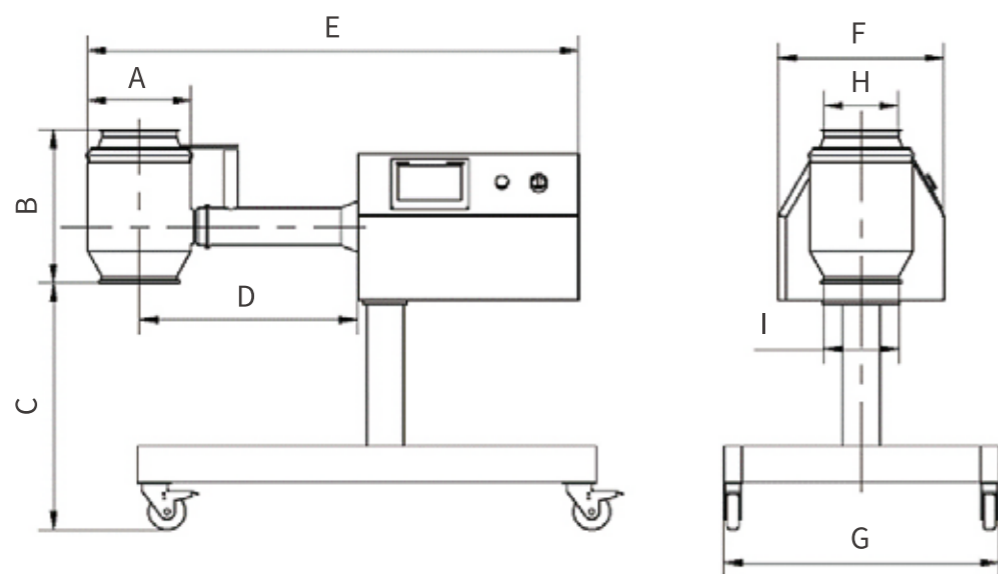
## Product Introduction

CMA series cone mill is used for milling and sieving various materials and is applicable to medical, food, and fine chemical fields. It has prominent effect for the milling and sieving of various dry materials, wet materials, and viscous materials.



## Structure Description

- CMA series cone mill consists of milling head, conical screen, and rotor. Siemens control system is used to control the target particle sizes by controlling the feeding speed and mill knife rpm.
- The materials are fed from the top of the conical mill, rotated and squeezed under the function of the mill knife, and then screened; after that the materials are discharged from the outlet at the bottom of the mill.
- The rotor of the mill knife has two structures: oblique angle and round angle, which are used for the milling and sieving of dry materials and moisture materials respectively.
- The rotor is complete with stirring teeth, which will loosen the materials during the milling process to prevent materials accumulation and bridging.
- The distance between the rotor and the screen can be precisely controlled to guarantee the materials being fully squeezed, milled, and screened.
- Different sizes of screens are available for meeting the particle size requirements. Screen mesh size range: 0.5 to -10mm.



Model	A	B	C	D	E	F	G	H	I
CMA150	Φ203.2	346	870	565	1290	450	750	Φ152.4	Φ152.4
CMA200	Φ273	428	675	600	1340	450	750	Φ203.2	Φ203.2

## Product Feature

Exchangeable milling head and adjustable stand

01

Rotor and screen easy to replace, applicable to dry and moisture materials

02

High opening rate to improve the milling efficiency

03

CIP/SIP realizable to satisfy the cleaning validation requirement

04

## Technical Parameter

Model	CMA-100	CMA-150	CMA-200	CMA-250
Capacity	~0.5 - 30 kg/h	~1500kg/h	~2300kg/h	~4000kg/h
Electricity	380V-50Hz	380V-50Hz	380V-50Hz	380V-50Hz
Rotating speed	Max.1500rpm	Max.1500rpm	Max.1500rpm	Max.1500rpm
Power	1.1kW	4.0kW	4.0kW	5.5kW
Weight	20kg	160kg	170kg	220kg
Dimensions	540*405*650mm	1290*750*1216mm	1340*750*1216mm	1400*750*1300mm
Screen mesh	Round hole diameter of 0.5mm to 10mm /square hole size of 3.0mm to 10mm /conidur screen hole size of 1.1mm to 8.0mm.			
Remark	The production capacity depends on the material characteristics and target particle size distribution.			

# SCMA Series Centrifugal Screen Mill

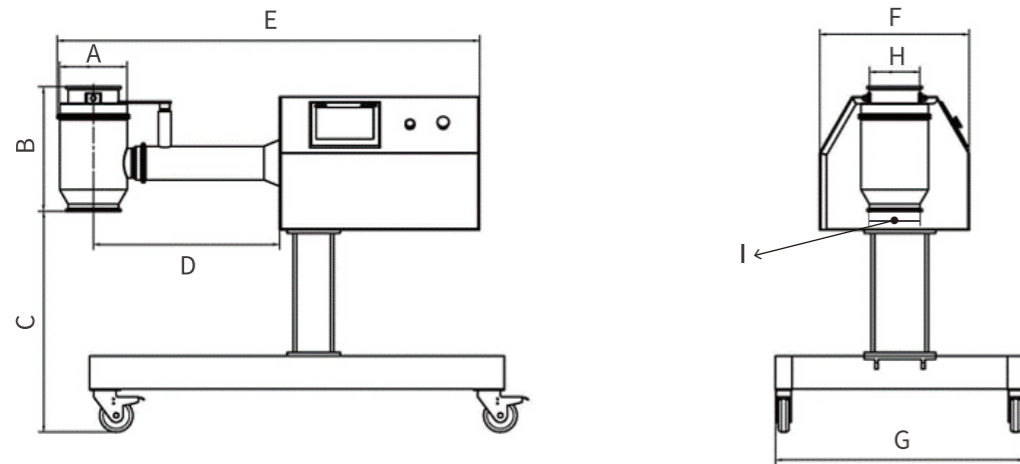
## Product Introduction

SCMA series centrifugal screen mill is widely applied in pharmaceutical, food and fine chemical industries. It is applicable to multiple materials and has significant milling and sieving effect especially for viscous materials.



## Structure Description

- SCMA series centrifugal screen mill consists of the milling head, one pair of fixed mill knife, and one rotary screen.
- The materials pass through the screen under the function of centrifugal force, and the target particle size can be controlled by adjusting the screen rotating speed and the gap with the mill knife.
- The screen has high opening rate, significantly improving the screening efficiency, especially suitable for the milling and homogenization of viscous materials with poor flowability.
- Different sizes of screens are available for meeting the particle size requirements. Mesh type: round and square holes. Screen mesh size range: 0.5mm to 10mm.



Model	A	B	C	D	E	F	G	H	I
SCMA150	Φ152.4	376	665	565	1275	450	750	Φ152.4	Φ152.4
SCMA200	Φ273	446	655	600	1345	450	750	Φ203.2	Φ203.2

## Product Feature

Exchangeable milling head and adjustable stand

01

Rotor and screen easy to replace, applicable to dry and moisture materials

02

High screen opening rate for improving the screening efficiency

03

CIP/SIP realizable to satisfy the cleaning validation requirement

04

## Technical Parameter

Model	SCMA-150	SCMA-200	SCMA-250
Capacity	~3600kg/h	~4500kg/h	~5400kg/h
Electricity	380V-50Hz	380V-50Hz	380V-50Hz
Rotating speed	Max.1500rpm	Max.1500rpm	Max.1500rpm
Power	4.0kW	4.0kW	5.5kW
Weight	158kg	163kg	220kg
Dimensions	1275*750*1040mm	1375*750*1040mm	1400*750*1300mm
Screen mesh	Round hole diameter of 0.5mm to 10mm /square hole size of 1mm to 10mm.		
Remark	The production capacity depends on the material characteristics and target particle size distribution.		

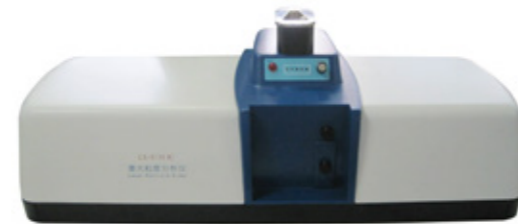
## Comprehensive Powder Testing Service

Relying on professional testing and analytical method, AUSTAR Powder/Solids Lab can optimize the process parameters based on the test results to improve equipment performance and product quality.



- Screening particle size analyzer

Applicable to particle size inspection of common abrasive materials as well as production grading and particle size inspection of superhard materials. It can carry out multi-level screening and inspection for the milled materials; screening range: 30 to 400 meshes.



- Laser particle size analyzer

Particle size testing is carried out for the milled products and the testing results will be displayed, recorded, and printed in the form of particle size distribution data sheet, distribution curve, and D10/D50/D90 data.



- Powder comprehensive property tester

The test items include powder tap density, bulk density, angle of repose, angle of spatula, differential angle, dispersion degree, and fluidity. The powder comprehensive characteristics tester can make comprehensive analysis of the characteristics of the milled products.

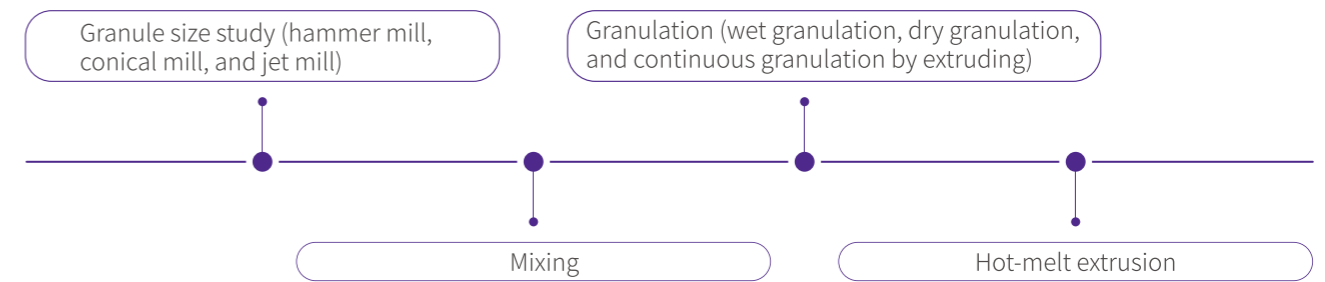


- Dynamic balance tester

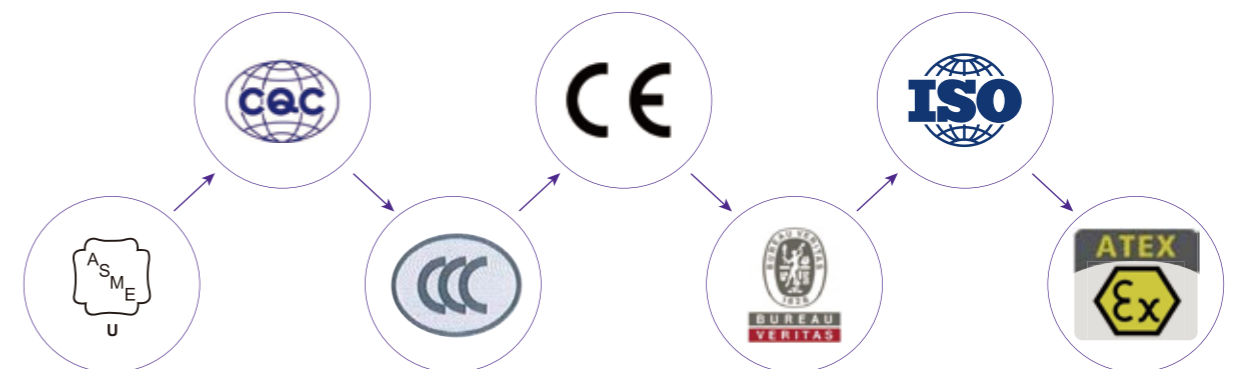
Dynamic balance testing is performed for the mill knife assembly. Dynamic balance level is up to SO1940 G6.3. Unbalancing allowance (obtained at the maximum equipment rotating speed): equipment models of HMA-150, HMA-270 and HMA-390.

## Process Service Abilities

AUSTAR Powder and Solid Process Research Center is equipped with advanced process equipment for material applicability testing and process optimization study. The Center is staffed with experienced R&D and production process engineers, who assist the customers in the following process studies:



AUSTAR Powder and Solid Process Research Center is complete with lab type and pilot type wet granulators, for wet granulating material applicability testing and process scale-up study. Lab type granulator uses changeable bowl technology to realize 0.3-3kg/batch product process testing and study; pilot type granulator can realize 20-30kg/batch product testing and process scale-up study.



**AUSTAR**

[www.austarunion.com](http://www.austarunion.com)

Email: [info@austar.com.hk](mailto:info@austar.com.hk)