



Planetary Ball Mil



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About us

Innova Bio-Meditech is one of the professional solution provider of laboratory and medical devices. Firmly committed to our mission of "sharing innovative bio-meditech solutions with the world", we are dedicated to innovation in the fields of Biology Project, Life Science, Pharmacy Industry and Medical Treatment.

Innova Bio-Meditech possesses a sound distribution and service network with business partners in North and Latin America, Europe, Africa and Asia-Pacific etc. We have built up a well established R&D, manufacture network with 3 centers in Qingdao, Shanghai and Suzhou. Inspired by the needs of our customers, we adopt advanced technologies and transform them into accessible innovation. This means constant effort and research, in order to more fully understand the developments of the market, INNOVA produce constantly upgraded product ranges by adding new products year after year.

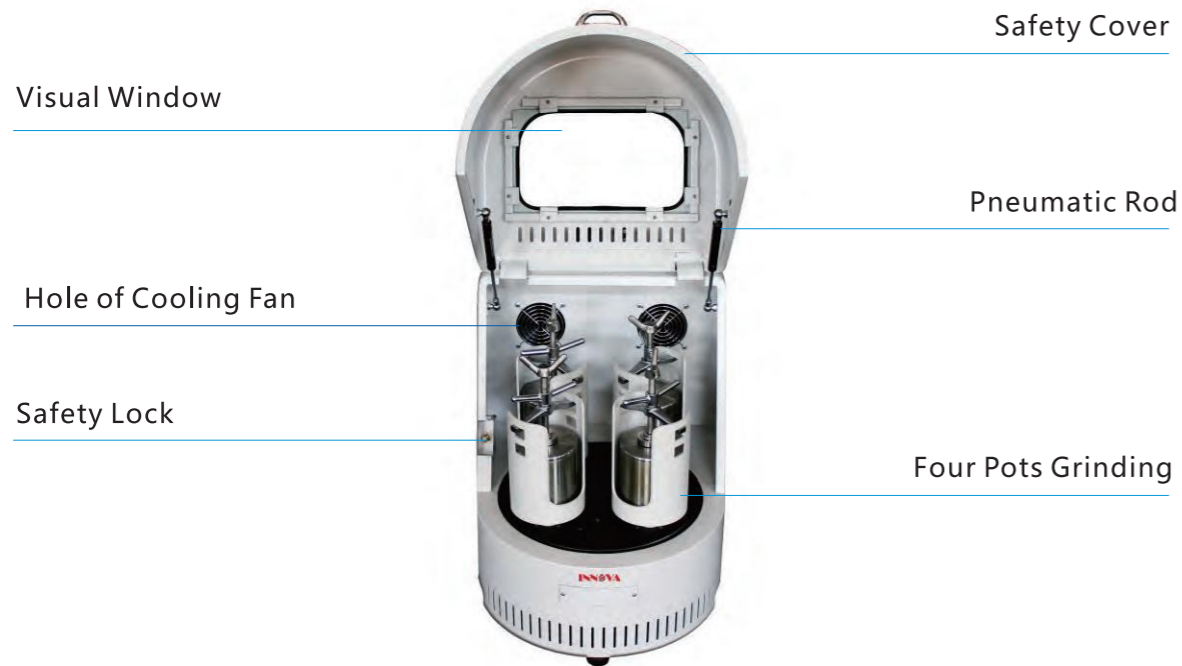
The passion for science



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Details of Products



Visual Window



Planetary Mechanism

Planetary disc by whole casting, New pressure pole, delicate and good appearance, Stable rotate speed, High efficiency, ultrafine grinding



Frequency Converter Control

Expected rotate speed can be selected according to experiment need, minimum scale of rotate speed is 0.2 rpm. Frequency converter owns protection device of under voltage and over voltage which provides necessary protection for motor.



Hole of Cooling Fan

Running of machine at high speed enhances speed of air flow inside the machine effectively and improving of cooling speed ensures the stable operation for long time.

Introduction

Shell of the machine is designed to be in square style that is stamped and formed by precise molding with delicate, generous and stable outlook. Planetary disc is made by whole casting and machined parts are made by NC machining process, drive gears are made precisely from special materials. All these factors ensure stability and low noise of machine when running at high speed. Pressing devise of pots is convenient to operate, safe and reliable.

Performance of Machine

Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
Volume of Grinding Pot	0.05L/pot-50L/pot Total Volume:0.2L-200L
Feed Size	Soft and Crispy material≤10mm, Other materials≤3mm
Out-put Granularity	Minimum Granularity can be reached to 0.1μm
Ratio of Rotate (Revolution vs Rotation)	Details stated in parameter table
Rotate Speed	Details stated in parameter table
Adjusting Mode of Rotate Speed	Frequency converter with stepless speed regulation

Features of Machine



1 Fashion Design

3D curve shape design, elegance and fashion



2 Exquisite workmanship

Delicate and Precise



3 Special Drive Gear

Special gear with low noise, lower about 15-20db compared with common gear,



4 Convenient Operation

Humanization design, Convenient operation.

Technical parameters

Model	IPB-0.4A	IPB-2A	IPB-4A	IPB-8A	IPB-10A	IPB-12A	IPB-16A
Specification	0.4L	2L	4L	8L	10L	12L	16L
Volume of each matched pot	50-100mL	50-500mL	250-1000mL	1-2L	1-2.5L	1-3L	2-4L
Quantity	4pcs						
Feed Size	Soil ≤10mm, Other materials ≤3mm						
Final Fineness	Minimum Granularity can be reached to 0.1μm						
Power supply	220V-50Hz						380V-50Hz
Motor power (KW)	0.25	0.75	1.5			3	
Total run time of setting (min)	1-9999						
Reciprocal running time (min)	1-999						
Adjustable speed	Revolution (rpm)	45-435	35-335	35-290			30-255
	Rotation (rpm)	90-870	70-670	70-580			60-510
Noisesdb	58±5	60±5					65±5
Speed control mode	Frequency Control						
Net weight (kg)	29	80	132			203	
Dimension (mm)	500×300×340	750×470×564	880×560×670			950×600×710	

Technical parameters

Model	Remark
IPB-0.4A	Can be matched with 50ml Vacuum Pot
IPB-2A	Matched with vacuum mill pots from 50ml to 250ml
IPB-4A	Matched with vacuum mill pots from 50ml to 1000ml
IPB-8A	Matched with vacuum mill pots from 50ml to 2000ml
IPB-10A	Matched with vacuum mill pots from 1000ml to 2000ml
IPB-12A	Matched with vacuum mill pots from 1000ml to 2000ml
IPB-16A	Matched with vacuum mill pots from 1000ml to 3000ml

Details of Products



Planetary Mechanism

Planetary disc by whole casting, Newpressure pole, delicate and good appearance, Stable rotate speed, High efficiency, ultrafine grinding



Frequency Converter Control

Expected rotate speed can be selected according to experiment need, minimum scale of rotate speed is 0.2 rpm. Frequency converter owns protection device of under voltage and over voltage which provides necessary protection for motor.



Hole of Cooling Fan

Running of machine at high speed enhances speed of air flow inside the machine effectively and improving of cooling speed ensures the stable operation for long time.



Pneumatic Rod

Support force is constant in process of running with appropriate damping, safe and convenient to operate.

Introduction

Shell of the machine is designed to be in square style that is stamped and formed by precise molding with delicate, generous and stable outlook. Planetary disc is made by whole casting and machined parts are made by NC machining process, drive gears are made precisely from special materials. All these factors ensure stability and low noise of machine when running at high speed. Pressing devise of pots is convenient to operate, safe and reliable.

Performance of Machine

Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
Volume of Grinding Pot	0.05L/pot-50L/pot Total Volume:0.2L-200L
Feed Size	Soft and Crispy material≤10mm, Other materials≤3mm
Out-put Granularity	Minimum Granularity can be reached to 0.1μm
Ratio of Rotate (Revolution vs Rotation)	Details stated in parameter table
Rotate Speed	Details stated in parameter table
Adjusting Mode of Rotate Speed	Frequency converter with stepless speed regulation

Features of Machine



1 Fashion Design

3D curve shape design, elegance and fashion

2 Delicate workmanship

Delicate and Precise

3 Special Drive Gear

Special gear with low noise, lower about 15-20db compared with common gear,

4 Convenient Operation

Humanization design, Convenient operation.

Technical parameters

Model	IPB-2	IPB-4	IPB-6	IPB-8	IPB-10	IPB-12
Specification	2L	4L	6L	8L	10L	12L
Volume of each matched pot	50-500mL	250-1000mL	1-1.5L	1-2L	1-2.5L	1-3L
Quantity	4pcs					
Feed size	Soil ≤10mm, Other materials ≤3mm					
Final fineness	Minimum Granularity can be reached to 0.1μm					
Power supply	220V-50Hz					
Motor power (KW)	0.75			1.5		
Total run time of setting (min)	1-9999					
Reciprocal running time (min)	1-999					
Adjustable speed	Revolution (rpm)	35-335			35-290	
	Rotation (rpm)	70-670			70-580	
Noise≤db	60±5					65±5
Speed control mode	Frequency Control					
Net weight (kg)	93			150		
Dimension (mm)	750×470×564			900×600×640		

Technical parameters

Model	Remark
IPB-2	Matched with vacuum mill pots from 50ml to 250ml
IPB-4	Matched with vacuum mill pots from 50ml to 750ml
IPB-6	Matched with vacuum mill pots from 50ml to 1000ml
IPB-8	Matched with vacuum mill pots from 50ml to 1500ml
IPB-10	Matched with vacuum mill pots from 50ml to 2000ml
IPB-12	Matched with vacuum mill pots from 1000ml to 2000ml

Details of Products



Planetary Mechanism

Planetary disc by whole casting, Newpressure pole, delicate and good appearance, Stable rotate speed, High efficiency, ultrafine grinding



Frequency Converter Control

Expected rotate speed can be selected according to experiment need, minimum scale of rotate speed is 0.2 rpm. Frequency converter owns protection device of under voltage and over voltage which provides necessary protection for motor.



Hole of Cooling Fan

Running of machine at high speed enhances speed of air flow inside the machine effectively and improving of cooling speed ensures the stable operation for long time.



Pouring Device

It is easy and quick for operators to unload pots, discharge powder and load pots with reduction of labor intensity and improvement of production efficiency.

Introduction

Large planetary ball mill for production is a kind of large-sized machine designed, enlarged and manufactured on basis of principle of small ball mill, which mainly applies batch production.

Features

Shell of the machine is made of thick steel by welding process with advantages of high strength, Impact resistance, anti deformation, delicate workmanship, solid appearance. Machined parts are made by heat treatment process and NC machining process, gear box is seal with groove embedded structure, drive gear is wear resistant and precise, frame and structural parts are designed with full consideration of resonance so as to ensure stability, safety and reliable operation under high load of machine that realizes to reduce noise. Design of self lubricating device and liquid oil reduces noise greatly and oil level gauge benefits replacement. Hoisting and pouring device are integrated designed and pouring device is adopted with vibration screening and discharging technology. It is easy and quick for operators to unload pots, discharge powder and load pots with reduction of labor intensity and improvement of production efficiency.

Performance of Machine

Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
Volume of Grinding Pot	0.05L/pot-50L/pot Total Volume:0.2L-200L
Feed Size	Soft and Crispy material≤10mm, Other materials≤3mm
Out-put Granularity	Minimum Granularity can be reached to 0.1μm
Ratio of Rotate (Revolution vs Rotation)	Details stated in parameter table
Rotate Speed	Details stated in parameter table
Adjusting Mode of Rotate Speed	Frequency converter with stepless speed regulation

Features of Machine



1 Fashion Design

3D curve shape design, elegance and fashion



2 Exquisite workmanship

Delicate and Precise



3 Special Drive Gear

Special gear with low noise, lower about 15-20db compared with common gear,



4 Hoisting and pouring device

Hoisting and pouring device are integrated designed

Technical parameters

Model	IPB-20	IPB-40	IPB-60	IPB-100	
Specification	20L	40L	60L	100L	
Volume of each matched pot	2-5L	5-10L	10-15L	20-25L	
Quantity	4pcs				
Feed size	Soil ≤10mm, Other materials ≤3mm				
Final fineness	Minimum Granularity can be reached to 0.1μm				
Power supply	380V-50Hz				
Motor power (KW)	4	5.5	7.5	11	
Total run time of setting (min)	1-9999				
Reciprocal running time (min)	1-999				
Adjustable speed	Revolution (rpm)	25-215	20-195	27-174	27-160
	Rotation (rpm)	50-430	40-390	40-260	40-240
Noisesdb	65±5	68±5			
Speed control mode	Frequency Control				
Net weight (kg)	330	468	900	1250	
Dimension (mm)	1200×750×920	1400×850×1160	1600×990×1250	1750×1140×1330	

Technical parameters

Model	Remark
IPB-20	Matched with vacuum mill pots from 2000ml to 4000ml
IPB-40	Can be matched with 5L Vacuum Pot
IPB-60	Can be matched with 10L Vacuum Pot
IPB-100	Can be matched with 20L Vacuum Pot

Details of Products



Planetary Mechanism

Planetary disc by whole casting, Newpressure pole, delicate and good appearance, Stable rotate speed, High efficiency, ultrafine grinding



Frequency Converter Control

Expected rotate speed can be selected according to experiment need, minimum scale of rotate speed is 0.2 rpm. Frequency converter owns protection device of under voltage and over voltage which provides necessary protection for motor.



Hole of Cooling Fan

Running of machine at high speed enhances speed of air flow inside the machine effectively and improving of cooling speed ensures the stable operation for long time.



Pneumatic Rod

Support force is constant in process of running with appropriate damping, safe and convenient to operate.

Introduction

Light horizontal planetary ball mill has four grinding pots installed horizontally and symmetrically on the vertical planetary plate, there is not regular flat bottom for pots when the machine makes planetary movement. In process of grinding, grinding balls are influenced by self gravity while balls are being influenced by two centrifugal forces of revolution and rotation, which benefit to strengthen degree of disordered movement of balls and materials. It greatly improves effects and efficiency of grinding. Because the pot has not flat bottom when rotating, the materials won't be sunk to the bottom of pot. Light planetary is in simple structure and convenient to be operated. The machine often applies small batch sample of experimental research.

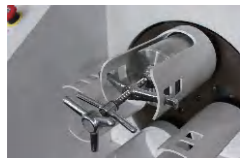
Features

Shell of the machine is designed to be in new and fashion style that is stamped and formed by precise molding with delicate, generous and stable outlook. Planetary disc is made by whole casting and machined parts are made by NC machining process, drive gears are made precisely from special materials. All these factors ensure stability and low noise of machine when running at high speed. Pressing devise of pots is convenient to operate, safe and reliable.

Performance of Machine

Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
Volume of Grinding Pot	0.05L/pot-50L/pot Total Volume:0.2L-200L
Feed Size	Soft and Crispy material≤10mm, Other materials≤3mm
Out-put Granularity	Minimum Granularity can be reached to 0.1μm
Ratio of Rotate (Revolution vs Rotation)	Details stated in parameter table
Rotate Speed	Details stated in parameter table
Adjusting Mode of Rotate Speed	Frequency converter with stepless speed regulation

Features of Machine



1 Grinding Structure

Horizontal structure of grinding pots solves the problem of sink to the pot's bottom of partial materials.



2 Special Drive Gear

Special gear with low noise, lower about 15-20db compared with common gear,



3 Convenient Operation

Humanization design, Convenient operation.



4 Delicate workmanship

Delicate and Precise

Technical parameters

Model	IHPB-0.4A	IHPB-1A	IHPB-2A	IHPB-4A
Specification	0.4L	1L	2L	4L
Volume of each matched pot	50-100ml	50-200ml	50-500ml	250-1000ml
Quantity	4pcs			
Feed Size	Soil ≤10mm, Other materials ≤3mm			
Final Fineness	Minimum Granularity can be reached to 0.1μm			
Power supply	220V-50Hz			
Motor power (KW)	0.75			
Total run time of setting (min)	1-9999			
Reciprocal running time (min)	1-999			
Adjustable speed	Revolution (rpm)		35-335	
	Rotation (rpm)		70-670	
Noise≤db	58±5	60±5		
Speed control mode	Frequency Control			
Net weight (kg)	86			
Dimension (mm)	700×510×570			

Technical parameters

Model	Remark
IHPB-0.4A	Can be matched with 50ml Vacuum Pot
IHPB-1A	Matched with vacuum mill pots from 50ml to 100ml
IHPB-2A	Matched with vacuum mill pots from 50ml to 250ml
IHPB-4A	Matched with vacuum mill pots from 50ml to 500ml

Details of Products



Planetary Mechanism
Planetary disc by whole casting, Newpressure pole, delicate and good appearance, Stable rotate speed, High efficiency, ultrafine grinding



Horizontal Planetary Mechanism
Gravity force and planetary force play a dual role of anti-subsidence



Safety Lock
Safety lock prevents machine from starting under condition of opening of safety cover in order to avoid accident.



Safety Cover
Internal Protection of Mill

Introduction

Large horizontal planetary ball mill is adopted with the bracket structure supported by both ends of double plates. Stability and anti load capacity of the machine are improved much efficiently, it solves limit of light load of light horizontal mill. Large horizontal planetary ball mill is mainly used for medium or small batch production of grinding.

Features

Shell of the machine is made of thick steel by welding process with high strength, Impact resistance, anti deformation, delicate workmanship, solid appearance. Machined parts are made by heat treatment process and NC machining process, drive gear is made of special materials precisely which ensure stability, safety and low noise of the machine when running at high speed. Designed function of brake lock ensures safe and reliable operation of hanging pot, loading pot and locking pot. Hoisting and pouring device are integrated designed and pouring device is adopted with vibration screening and discharging technology. It is easy and quick for operators to unload pots, discharge powder and load pots with reduction of labor intensity and improvement of production efficiency.

Performance of Machine

Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
Volume of Grinding Pot	0.05L/pot-50L/pot Total Volume:0.2L-200L
Feed Size	Soft and Crispy material≤10mm, Other materials≤3mm
Out-put Granularity	Minimum Granularity can be reached to 0.1μm
Ratio of Rotate (Revolution vs Rotation)	Details stated in parameter table
Rotate Speed	Details stated in parameter table
Adjusting Mode of Rotate Speed	Frequency converter with stepless speed regulation

Features of Machine



1 Grinding Structure

Horizontal structure of grinding pots solves the problem of sink to the pot's bottom of partial materials.



2 Special Drive Gear

Special gear with low noise, lower about 15-20db compared with common gear,



3 Convenient Operation

Humanization design, Convenient operation.

Technical parameters

Model	IHPB-2~6B	IHPB-8B	IHPB-10B	IHPB-12B	IHPB-16B	IHPB-20B	IHPB-40B	IHPB-60B	IHPB-80B	IHPB-100B		
Specification	2~6L	8L	10L	12L	16L	20L	40L	60L	80L	80L		
Volume of each matched pot	0.05-1.5L	1-2L	1-2.5L	1-3L	2-4L	2-5L	5-10L	10-15L	15L-20L	15-20L		
Quantity	4pcs											
Feed Size	Soil ≤10mm, Other materials ≤3mm											
Final Fineness	Minimum Granularity can be reached to 0.1μm											
Power supply	220V-50Hz					380V-50Hz						
Motor power (KW)	1.5		3		4		5.5		7.5		11	
Total run time of setting (min)	1-9999											
Reciprocal running time (min)	1-999											
Adjustable speed	Revolution (rpm)	35-335	35-290		30-240	25-215		20-206	35-193	35-193		
	Rotation (rpm)	70-670	70-580		60-480	50-430		50-310	50-290	50-290		
Noise≤db	60±5				65±5			68±5				
Speed control mode	Frequency Control											
Net weight (kg)	256	370		440	700	760	1020	1160	1160			
Dimension (mm)	1220×620×810	1320×670×920		1530×750×960	1620×840×1040	1770×860×1100	1860×1050×1280	2100×1150×1370	2100×1150×1370			

Technical parameters

Model	Remark
IHPB-2~6B	Matched with vacuum mill pots from 50ml to 1000ml
IHPB-8B	Matched with vacuum mill pots from 50ml to 1500ml
IHPB-10B	Matched with vacuum mill pots from 1L to 2L
IHPB-12B	Matched with vacuum mill pots from 1L to 2L
IHPB-16B	Matched with vacuum mill pots from 1L to 3L
IHPB-20B	Matched with vacuum mill pots from 2L to 4L
IHPB-40B	Matched with vacuum mill pots from 3L to 5L
IHPB-60B	Matched with vacuum mill pots from 5L to 10L
IHPB-80B	Matched with vacuum mill pots from 10L to 15L
IHPB-100B	Matched with vacuum mill pots from 10L to 15L

Details of Products



Planetary Mechanism
Planetary disc by whole casting, Newpressure pole, delicate and good appearance, Stable rotate speed, High efficiency, ultrafine grinding



Safety Cover
Internal Protection of Mill



Hole of Cooling Fan
Running of machine at high speed enhances speed of air flow inside the machine effectively and improving of cooling speed ensures the stable operation for long time.



Pneumatic Rod
Support force is constant in process of running with appropriate damping, safe and convenient to operate.

Introduction

Full-directional planetary ball mill is developed on basis of vertical planetary ball mill with an increase of turning function of planetary disc. The planetary disc and pots are turning at 360° tipping bucket type in a tridimensional space while they are making planetary movement. Multidirectional and multidimensional movement increase degree of disorder movement of balls and materials. All materials in the ball are grinded without any dead space and grinded powder is much more uniform and fine. This model solves problems of sink bottom and clay pot completely.

Features

Shell of the machine is made of thick steel by welding process with high strength, Impact resistance, anti deformation, delicate workmanship, solid appearance. Machined parts are made by heat treatment and NC machining process, drive gear is made of special materials precisely which ensure stability, safety and low noise of the machine when running at high speed. Turning motor has function of brake locking which realizes random stop at any angle, safe and reliable.

Performance of Machine

Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
Volume of Grinding Pot	0.05L/pot-50L/pot Total Volume:0.2L-200L
Feed Size	Soft and Crispy material≤10mm, Other materials≤3mm
Out-put Granularity	Minimum Granularity can be reached to 0.1μm
Ratio of Rotate (Revolution vs Rotation)	Details stated in parameter table
Rotate Speed	Details stated in parameter table
Adjusting Mode of Rotate Speed	Frequency converter with stepless speed regulation

Features of Machine



1 Full-directional Operation
Full-directional operation solves problems of sink bottom and clay pot of partial materials



3 Four Pots Grinding
Four pots can be grinded at same time (same material or different materials) with wet, dry or vacuum grinding



2 Special Designed Gear
Special gear makes low noise of operation.

Technical parameters

Model	IFPB-2	IFPB-4	IFPB-6	IFPB-8	IFPB-10	IFPB-12	IFPB-16	IFPB-20	IFPB-40
Specification	2L	4L	6L	8L	10L	12L	16L	20L	40L
Volume of each matched pot	50-500mL	250-1000mL	1-1.5L	1-2L	1-2.5L	1-3L	2-4L	2-5L	4-10L
Quantity	4pcs								
Feed Size	Soil ≤10mm, Other materials ≤3mm								
Final Fineness	Minimum Granularity can be reached to 0.1μm								
Power supply	220V-50Hz					380V-50Hz			
Motor power (KW)	0.75		1.5			3	4	5.5	
Total run time of setting (min)	1-9999								
Reciprocal running time (min)	1-999								
Adjustable speed	Revolution (rpm)	35-335		35-290			30-255	25-215	20-195
	Rotation (rpm)	70-670		30-290			60-510	50-430	40-390
Noise≤db	60±5						65±5	70±5	
Speed control mode	Frequency Control								
Net weight (kg)	317			420			550	1150	1400
Dimension (mm)	1330×770×850			1360×850×930			1530×940×1100	1700×1210×1300	1900×1450×1480

Technical parameters

Model	Remark
IFPB-2	Matched with vacuum mill pots from 50ml to 250ml
IFPB-4	Matched with vacuum mill pots from 50ml to 500ml
IFPB-6	Matched with vacuum mill pots from 50ml to 1000ml
IFPB-8	Matched with vacuum mill pots from 50ml to 1500ml
IFPB-10	Matched with vacuum mill pots from 1L to 2L
IFPB-12	Matched with vacuum mill pots from 1L to 2L
IFPB-16	Matched with vacuum mill pots from 1L to 3L
IFPB-20	Matched with vacuum mill pots from 1L to 4L
IFPB-40	Matched with vacuum mill pots from 2L to 5L

Details of Products



Planetary Mechanism

Planetary disc by whole casting, New pressure pole, delicate and good appearance, Stable rotate speed, High efficiency, ultrafine grinding



Safety Cover

Internal Protection of Mill



Hole of Cooling Fan

Running of machine at high speed enhances speed of air flow inside the machine effectively and improving of cooling speed ensures the stable operation for long time.



Planetary Mechanism

Planetary disc by whole casting, New pressure pole, delicate and good appearance, Stable rotate speed, High efficiency, ultrafine grinding

Introduction

Dual planetary ball mill is a kind of typical and high energy ball mill, which is adopted with dual planetary structure where big plate brings small plate to make movement. Radius of revolution and rotation speed is much larger than that of common ball mill in same size. Centrifugal force is increased double times, collision, shear and friction force between the balls increases significantly. Thus effects and efficiency of grinding is improved greatly. Partial materials can be grinded to nano scale.

Features

Shell of the machine is made of thick steel by welding process with high strength, Impact resistance, anti deformation, delicate workmanship, solid appearance. Machined parts are made by heat treatment and NC machining process, drive gear is made of special materials precisely which ensure stability, safety and low noise of the machine when running at high speed.

Performance of Machine

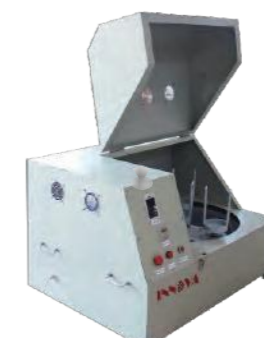
Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
Volume of Grinding Pot	0.05L/pot-50L/pot Total Volume:0.2L-200L
Feed Size	Soft and Crispy material ≤10mm, Other materials ≤3mm
Out-put Granularity	Minimum Granularity can be reached to 0.1 μm
Ratio of Rotate (Revolution vs Rotation)	Details stated in parameter table
Rotate Speed	Details stated in parameter table
Adjusting Mode of Rotate Speed	Frequency converter with stepless speed regulation

Features of Machine



1 Special Gear

Special gear with low noise, lower about 15-20db compared with common gear, stable rotate speed of gear drive ensures uniformity and repeatability of experiment.



2 Convenient Operation

Humanization design and more convenient operation.



3 Four Pots Grinding

Four pots can be grinded at same time (same material or different materials) with wet, dry or vacuum grinding

Technical parameters

Model	IDPB-0.4	IDPB-1	IDPB-2	IDPB-4	IDPB-6
Specification	0.4L	1L	2L	4L	6L
Volume of each matched pot	50-100mL	250mL	500mL	1000mL	1500mL
Quantity	4pcs				
Feed Size	Soil ≤10mm, Other materials ≤3mm				
Final Fineness	Minimum Granularity can be reached to 0.1μm				
Power supply	220V-50Hz	380V-50Hz			
Motor power (KW)	0.75				
Total run time of setting (min)	1-9999				
Reciprocal running time (min)	1-999				
Adjustable speed	Revolution (rpm)		70-560		
	Rotation (rpm)		140-1120		
Noise≤db	58±5	60±5			
Speed control mode	Frequency Control				
Net weight (kg)	250				
Dimension (mm)	1150×800×760				

Technical parameters

Model	Remark
IDPB-0.4	Can be Matched with 50ml Vacuum Pot
IDPB-1	Matched with vacuum mil pots from 50ml to 100ml
IDPB-2	Matched with vacuum mil pots from 50ml to 250ml
IDPB-4	Matched with vacuum mil pots from 50ml to 1000ml
IDPB-6	Matched with vacuum mil pots from 50ml to 1000ml

Details of Products



Microcomputer operation and control system
Powerful function of the system, simple and visual operation and friendly human-machine interface.



Safety Cover
Internal Protection of Mill



Frequency Converter Control
Expected rotate speed can be selected according to experiment need, minimum scale of rotate speed is 0.2 rpm. Frequency converter owns protection device of under voltage and over voltage which provides necessary protection for motor.



Hole of Cooling Fan
Running of machine at high speed enhances speed of air flow inside the machine effectively and improving of cooling speed ensures the stable operation for long time.

Introduction

Microcomputer planetary ball mill is a kind of equipment configured with a touch screen of operation & control system based on common planetary ball mill, which improves its grade and operation performance. Microcomputer planetary ball mill is mainly to meet high level clients' requirements of higher quality and better operation performance.

Hardware of control system is adopted with famous brand's products with strong functions of password setting, programming freely, storage and call of multiple sets of programs, process monitor and fault alarm. Visual operation and simple humanization realize friendly human-computer interface.

Performance of Machine

Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
Volume of Grinding Pot	0.05L/pot-50L/pot Total Volume:0.2L-200L
Feed Size	Soft and Crispy material≤10mm, Other materials≤3mm
Out-put Granularity	Minimum Granularity can be reached to 0.1μm
Ratio of Rotate (Revolution vs Rotation)	Details stated in parameter table
Rotate Speed	Details stated in parameter table
Adjusting Mode of Rotate Speed	Frequency converter with stepless speed regulation

Features of Machine



1 Design of Touch Screen

Simple and visual operation

2 Delicate workmanship

Delicate and Precise

3 Special Drive Gear

Special gear with low noise, lower about 15-20db compared with common gear,

4 Convenient Operation

Humanization design, Convenient operation.

Details of Products



Planetary Mechanism

Planetary disc by whole casting, Newpressure pole, delicate and good appearance, Stable rotate speed, High efficiency, ultrafine grinding



Frequency Converter Control

Expected rotate speed can be selected according to experiment need, minimum scale of rotate speed is 0.2 rpm. Frequency converter owns protection device of under voltage and over voltage which provides necessary protection for motor.



Hole of Cooling Fan

Running of machine at high speed enhances speed of air flow inside the machine effectively and improving of cooling speed ensures the stable operation for long time.



Pneumatic Rod

Support force is constant in process of running with appropriate damping, safe and convenient to operate.

Introduction

Cryogenic planetary ball mill is composed of planetary ball mill and refrigeration device. Most of materials are heating-up because of friction and exothermal reaction in process of grinding at high speed, which may cause changes of chemical and physical properties of materials and lead to negative effect of grinding. Cryogenic planetary ball mill is mainly used for grinding materials which need to control their temperature.

Features

Cryogenic planetary ball mill is composed of planetary ball mill and refrigeration device which utilizes air conditioning refrigeration principle. Cold air circulation takes away the heat generated by grinding. Temperature of the grinding space may be controlled within 5-15 according to the differences of environmental temperature. The machine is mainly used for grinding ultrafine of materials that are requested under low temperature working process. Simple structure of refrigeration device, convenient for operation and maintenance, low energy consumption.

Performance of Machine

Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
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Rotate Speed	Details stated in parameter table
Adjusting Mode of Rotate Speed	Frequency converter with stepless speed regulation

Features of Machine



1 Refrigeration Design

Matched with a refrigeration equipment equivalent of an air-conditioner.



2 practicability

Temperature of mill pot may be controlled within 30-50°C



3 Configuration of Cryogenic Device

Cryogenic device can be configured with vertical planetary ball mill, horizontal planetary ball mill as well as 360 degree planetary ball mill.

Details of Products



Ultrasonic Controller

Composed of ultrasonic generator and ultrasonic transducer



Safety Cover

Internal protection of mill



Planetary Mechanism

Planetary disc by whole casting, Newpressure pole, delicate and good appearance, Stable rotate speed, high efficiency, ultrafine grinding



Hole of Cooling Fan

Running of machine at high speed enhances speed of air flow inside the machine effectively and improving of cooling speed ensures the stable operation for long time.

Introduction

Ultrasonic planetary ball mill is based on 1/2L Vertical planetary ball mill. The equipment is mainly used for mixing and fine grinding with high particle size requirements. When using traditional ball mill equipment, sinking, agglomeration, wall sticking, and agglomeration will occur. materials of other phenomena. Our ultrasonic planetary ball mill is small in size, complete in function, high in efficiency and low in noise. It is an ideal equipment for scientific research institutes, universities, and enterprise laboratories to obtain research samples. It is equipped with a vacuum ball mill tank and can grind samples in a vacuum state.

Applications

Widely used in geology, mining, metallurgy, electronics, building materials, ceramics, chemical industry, light industry, medicine, beauty, environmental protection, etc.

Performance of Machine

Transmission Mode	Gear Drive
Working Mode	2 or 4 pots can be used each time
Max Volume of Load	Two-thirds of pot's volume
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Features of Machine



1 Equipment Features

Solid and firm, professional appearance design



2 Configure ultrasonic equipment

Vibrating while grinding can solve the problems of bottom sinking, caking, wall adhesion and agglomeration.



3 Use in wet grinding state

Grinding solid particles, suspensions and pastes with different particle sizes and materials, the minimum particle size of the grinding products can reach nanometer level.

Selection of Products

Selection of Grinding Pot

Selection of pot size: There are four grinding pots on the planetary disc and volume of each pot is one-fourth of total volume of the machine. For example, one set of planetary ball mill with 4L volume needs to match 4 pieces of 1L pot. If you need to match vacuum pot, you shall have to choose bigger model of machine because dimension of vacuum pot is larger than that of common pot with same volume.



XQM-4L



Matched with 4 mill pots of 1L volume each or Matched with 4 vacuum jars of 0.5L volume each



Reference Table for Matched Pots of Planetary Ball Mill

Type No	Specification	Volume of Each Matched Pot	Quantity	Remarks
IPB-0.4A	0.4L	50-100ml	4pcs	Can be Matched with 50ml Vacuum Pot
IPB-2A	2L	50-500ml	4pcs	Matched with vacuum mill pots from 50ml to 250ml
IPB-4A	4L	250-1000ml	4pcs	Matched with vacuum mill pots from 50ml to 1000ml
IPB-8A	8L	1-2L	4pcs	Matched with vacuum mill pots from 50ml to 2000ml
IPB-12A	12L	1-3L	4pcs	Matched with vacuum mill pots from 1L to 2L
IPB-16A	16L	2-4L	4pcs	Matched with vacuum mill pots from 1L to 3L
IPB-20	20L	2-5L	4pcs	Matched with vacuum mill pots from 2L to 4L
IPB-40	40L	5-10L	4pcs	Can be Matched with 5L Vacuum Pot
IPB-60	60L	10-15L	4pcs	Can be Matched with 10L Vacuum Pot
IPB-100	100L	20-25L	4pcs	Can be Matched with 20L Vacuum Pot

Selection of pot's material: Pot's material has no pollution to the grinding materials and no effect to the appearance of powder.

Category & Request of Grinding Material	Reference for Mill Pots' Material Option
Soil and other Materials which impurities are not allowed to be brought.	Agate Pot
Metal and non-metal materials which impurities are not allowed to be brought.	Zirconia Pot
High hardness materials like diamond, hard alloy	Hard Alloy Pot
Strong acid and strong alkali substances, and materials under high temperature.	PTFE Mill Pot
Iron and steel minerals, impurities are not highly sensitive materials	304 Stainless Steel Mill Pot
Pigment material, and materials which can be processed at high temperature.	PU Mill Pot
Containing aluminum material like ceramic glaze	Corundum Pot
Electronic material like lithium battery	Polyurethane Mill Pot
Easily oxidized materials which need to be protected by special gas	Vacuum Mill Pot



PU Mill Pot



PTFE Mill Pot



Zirconia Pot



Hard Alloy Pot



Polyurethane Mill Pot



Stainless Steel Mill Pot

Matching Ways for Mill Jars and Balls

	Agate Grinding Balls	Zirconia Grinding Balls	Tungsten Carbide Balls	Stainless Steel Balls	Alumina Balls	Polyurethane core ball	Steel Ball
Agate Mill Jar	▲						
Zirconia Mill Jar		▲					
Tungsten Carbide Mill Jar		○	▲				
PTFE Mill Jar	▲	○					
Stainless Steel Mill Jar				▲			○
Nylon Mill Jar	○	▲					
Alumina Mill Jar		○			▲		
PU Mill Jar	○	○		○		▲	

Remarks: ▲ Best Match, ○ Optional Match.

Best Match Ratio: Large-sized Ball: 20%; Medium-sized Ball: 50%; Small-sized Ball: 30%



Stainless steel mill jar can be matched with stainless steel balls



Zirconia mill jar can be matched with zirconia balls



Alumina mill jar can be matched with alumina balls



Tungsten carbide mill jar can be matched with zirconia balls



Nylon mill jar can be matched with zirconia balls



PTFE mill jar can be matched with agate balls



PU mill jar can be matched with agate balls



Tempered nylon mill jar can be matched with agate balls



Agate mill jar can be matched with agate balls