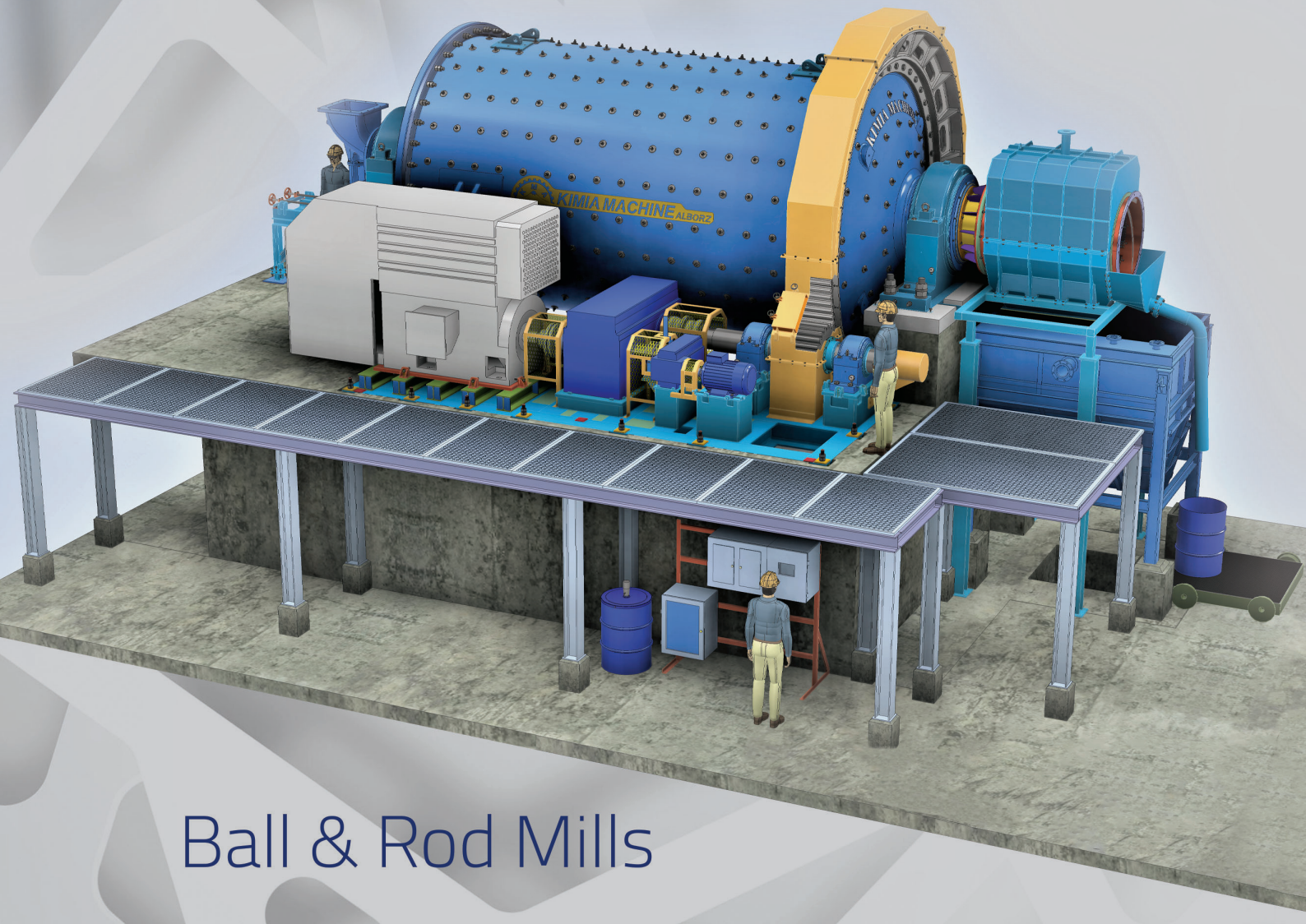
ALBORZ CO.

KIMIA MACHINE

Mineral Processing Machinery



Ball & Rod Mills

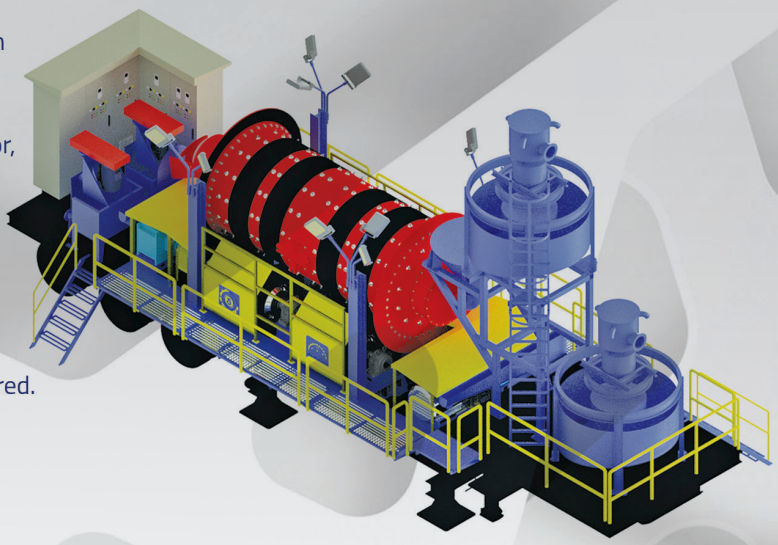
The Kimia Machine Alborz designed continues dry and wet, rod and ball mills cover a wide range application in mineral processing industries in size reduction and fine and ultra - fine powder production.

These ball mills to be used in closed circuit with air separator, air classifiers or hydro cyclone will form a micronizing line.

The different powder particle size and fineness depends on the hardness of materials can be produced by proper design suitable to material characteristics.

The wet continues rod and ball mills can be also manufactured.

These ball mills can be used in different industries such as: mineral powder production plants, chemical industries and beneficiation plants.



Specification

Mill shell Diameter (m)	Mill shell Length (m)	Motor Power (Kw)
1.6	3.2 … 4.5	90-132
2	3 ... 6	132-315
2.4	4 … 6	250-450
2.7	3 … 10	315-1250
3	3 … 10	400-1400
3.2	3 … 11	400-1500
3.4	4 … 11	500-1600
3.6	4 … 11	560-2000
3.8	4 … 11	800-2200
4	4 … 11	1000-2500
4.5	5 … 11	1500-3400
5	5 … 10	2200-3800
5.5	6 … 10	3000-4600
6	6 … 10	3800-6000

MAIN GRINDING MATERIALS

- Barite
- Silver
- Gold
- Copper
- Zinc - Lead
- Cement
- Calcitte
- Limestone
- Feldspar
- Quartz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Mineral Processing Machinery

Crushing , Grinding , Separating
Material Handeling , Equipment
Dust Collector System

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Vertical & Raymond Roller Mills

Functional process

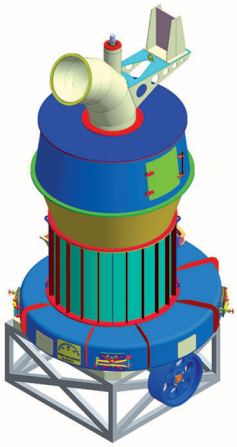
The machine is used to grind barite, limestone, ceramics, etc. Such non-inflammable and non-explosive stuff, which the hardness is below 5 Mohs ad moisture is less than 20% in the trades of mining, metallurgy, chemical engineering and construction material. The fineness size is adjustable in the range of (60 - 400) mesh. It is possible to produce 30 - 60 mesh powder through assembling special device in the machine.

Specification Only for Reymond Roller mill

Raymond Roller Mills

Model	Roller(mm) Number	Roller(mm) Diameter Ring	Fineness of product(mesh)	Power for main roller mill (Kw)
KRM138	4	1380	16 - 325	90
KRM175	5	1750	16 - 325	160
KRM215	5	2150	16 - 325	280

Model	Fineness (mesh) Capacity (t/h) 16-325 mesh	Classifier (kw)
KRM138	6.5 - 15	18.5
KRM175	11 - 25	22
KRM215	30 - 45	45



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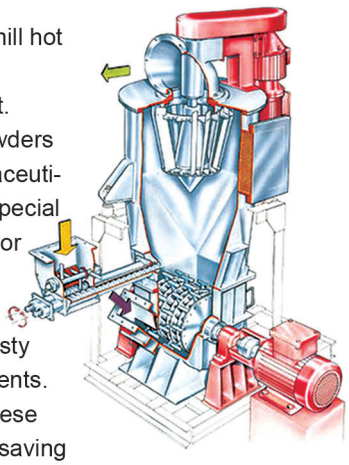
Dryer Pulverizer Model: DPV & DPH

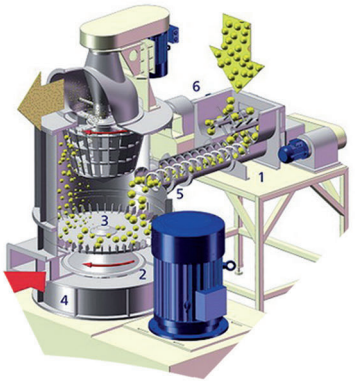
Micron Dryer

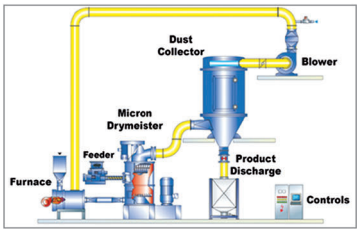
Most up to date technology in flash and continues drying industry. Suitable for simultaneous operations of drying and milling of wet materials and separating in fine powders.

Including:



Inlet feeder for wet materials mill hot air or gas inlet,
classifier outlet for fine product.
Suitable for producing fine powders of minerals chemicals, pharmaceuticals and food industries with special abilities for: drying slurry, past or wet filter cake. Drying wet of water of crystallization drying, heat, sensitive or explosive dusty materials and recovery of solvents. The micron dryer, having all these capabilities, still is very space saving with little heat loss, high overall heat transfer coefficient and complete dust free.





It has a very good flexibility in controlling residencetime, moisture of content products and product fineness.

	Evaporation (200◦c,Kg/h)	Nominal air volume m3/h	Mill KW / RPM		Classifier Kw /RPM	
DPV 3	200	3600-6000	15-30	1500- 2200	5.5	1500
DPV4	500	6000-12000	30-45	800-1500	7.5	1300
DPV5	1000	12000-19800	45-55	600-800	11	800
DPH3	200	3600-6000	45-55	2210-3000	5.5	1500
DPH4	500	6000-12000	75-90	1000-2000	7.5	1300
DPH5	1000	12000-19800	160-200	800-1000	11	800
DPH6	1400	20000-30000	200-250	700-900	15	650
DPH7	2000	30000-48000	250-355	600-800	22	500

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Mesplex Air Classifier KMS

Model: KMS

Fineness range:

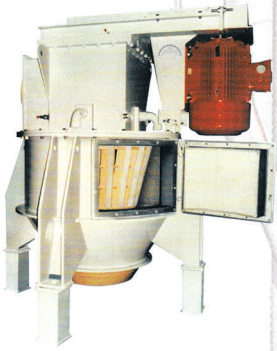
Approx. d97=15-250µm. The slow rotation of the KMS wheel in the medium fineness range brings advantages regarding the pressure drop and wear rate. The classifier can also be operated with high air flow rates.

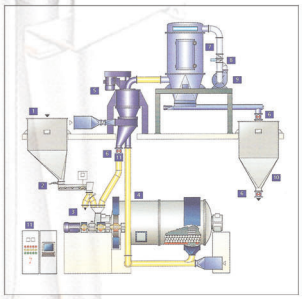
Application Areas:

Talc, calcium carbonate, bentonite, kaolin, quartz, pigment, fine grade chemical, etc. The KMS micron air classifier unit can be operated in closed circuit operation with a ball mill or as a classifier head in conjunction with a table roller mill. The KMS classifier wheel is suspended from a vertical shaft and is of welded construction. The vanes of the wheel are inclined and tapered into a conical shape. During operation oversize product is deflected away from the rotating wheel.

Designs:

For operation on abrasive materials the classifier can be offered in a wear protect design. For application in the food or pharmaceutical industries, the classifier can be manufactured in stainless steel.





Mesplex Air Classifier	K.M.S-3H	K.M.S-4H	K.M.S-5H	K.M.S-6H
Scale-up factor F = approx	5	10	20	40
Drive power [kW]	15	30	45	55
Max.speed [rpm]	2500	1600	1100	800
Air flow rate [m3/h]	4800	9000	18000	36000
Fineness d97 = [µm]	10	12,5	15	18
Fines yield, max*) df97 45 µm in [t/h]	1.1	2.1	4.2	8.4
45 µm in [t/h]	1.6	2.9	5.9	12.0
63 µm in [t/h]	1.8	3.4	6.7	13.5

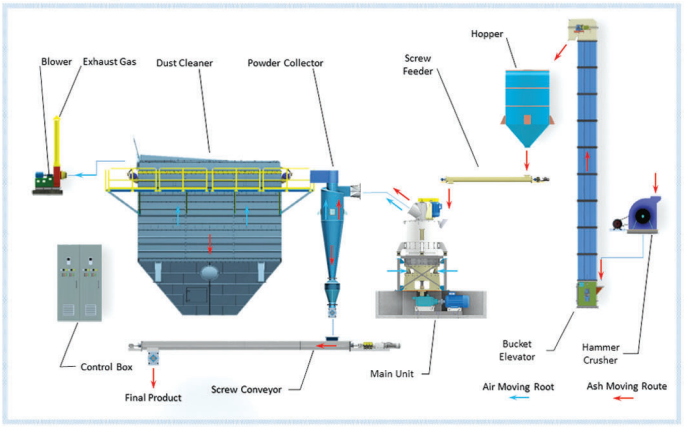
Ultra Girnding Mill KGM

Model: Ultra Mill Plex

KGM Series grinding mill is a new kind of grinding mill which is developed with more than 20 years' experience manufacturing grinding mills and absorbed and adopted foreign advanced technology. It's mainly used to grind low of medium hardness raw materials.

Lump raw materials are sent to hopper after being crushed by hammer crusher, the crushed material from hopper will feed to grinding mill by vibrating feeder. The main motor drive the main shaft and turn plate rotate by reducer. Under the impact of the centrifugal force, the material is sent to the circle edge, and fell into the roller path of the grinding mill being impacted, rolled and grinded into powders. Then the powders are sent to the classifier by the high pressure blower, In the classifier, the coarse powder fall into the grinding cavity to be re-grinded, and the qualified powders are collected by the cyclone collector and discharged by the valve below. Those airflow with little fine powders are discharged after being refined by impulse bag filter via blower and muffler.

Flow Digram of KGM



High Efficiency: Under the same finished final size and the same motor power, the capacity of micro powder grinding mill is twice as much as jet mill, mixing grinder and ball mill, and energy consumption decreased 30%.

High fineness, flexible adjustment: The final fineness of the grinding materials can be adjusted between 200 meshes and 2500 mesh (74-5 micron).

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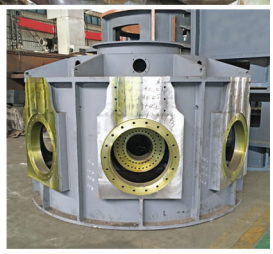
MAIN FEATURES:

1. Low investment cost.
2. High output rate of finished powders.
3. Long life of tear and wear parts.
4. Operation in grinding cavity, safe and reliable.
5. Super fine finished powders.
6. Environmental friendly, no pollution.
7. Operation and maintenance friendly.



Model	KGM-90	KGM-125	KGM-168
Working Diameter (mm)	900	1250	1680
Feeding Size (mm)	20≥	20≥	20≥
Rotary Speed (r/min)	200-220	135-155	120-130
Capacity (t/h)	0.6-6.5	2.8-20	5-45
Number of Roller (PCS)	24-29	30-40	30-44
Q'ty of ring layer (PCS)	3	4	4
Output size (micron)	5-75	6-100	9-100
Overall dimension (m)	14.7*4.8*7.2	14*9*10.25	26.3*7.5*11.9
Power (Kw)	75	160-200	250-300

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Pin Mills

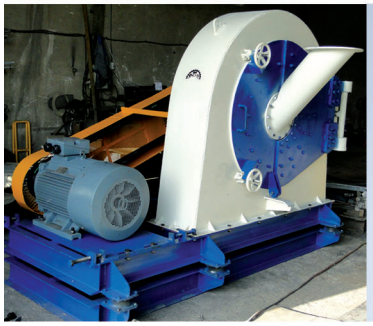
Model: Pinplex & Coating plex

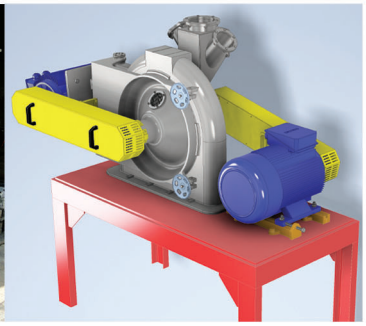
General:

The feed material is fed into center of rotor and is conveyed to periphery through series reater plate thus gradually reducing to fine powder, screen drum fitted around rotor, permits ground material of desired fineness to come out of the mill for collection important technical information on pin mill premium pin mill is specially designed pulverized to deal efficiently and economically with a wide range of materials predetermined from coarse to fine powder up to 100- 300 micron and above for very fine powder premium pin mills are designed with are separator system.

the installation of such large pin mills have hopper of appropriate size screw feeder , magnet , rotating grinding plate discharge outlet and main shaft mounted on bearing housing.

Pinplex	KPM 630	KPM 800	KPM 920
Rotor Diameter (mm)	630	800	920
Motor Power (kw)	55	75	90
Rotor Speed (rpm)	2000-3000	1500-22000	1000-2000





The Coating plex fine impact mill enables high differential speeds of up to 240 m/s. at the same time the two counter-rotating discs prevent build-up. The hinged mill door can be opened for easy cleaning.

Highest Coating quality through perfect hydro-phobization. The practical test proves it. clear water after two minutes stands good quality.

Coating plex	KCPM 500	KCPM 630	KCPM 800
Rotor Diameter (mm)	500	630	800
Motor Power (kw)	2 x 45	2 x 55	2 x 75
Rotor Speed (rpm)	2500-4000	2000-3000	2000-2500

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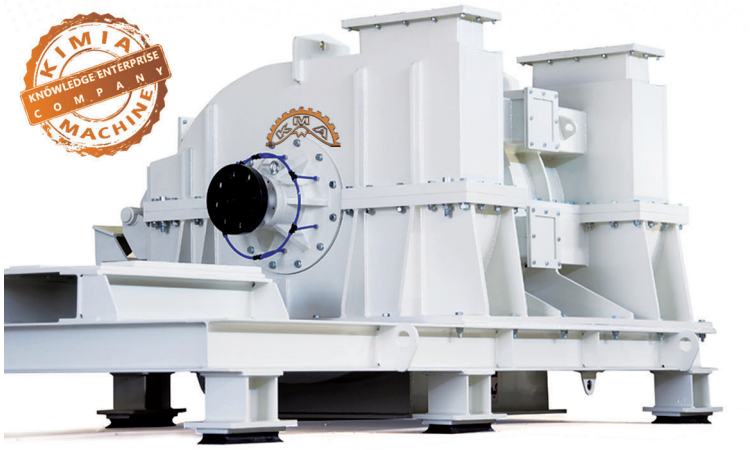
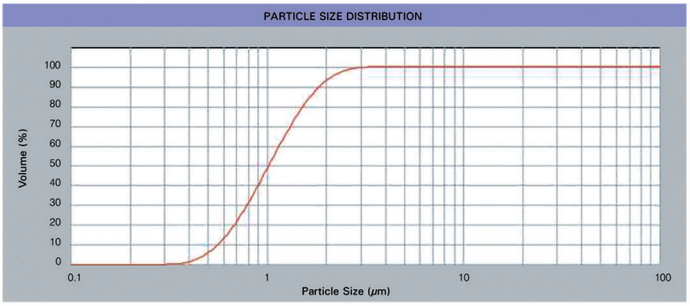
Twisterplex Turbo Hybrid super fine Air classifier Model: TTH





TECHNICAL DATA TTH SERIES		315/2	500/2	620/2	710	710/2	1010
Air throughput approx.	[m3/h]	12,000	22,000	26,000	29,000	45,000	55,000
Feedrate Up to	[t/h]	7	9	14	17	22	28
Rotor speed max.	[rpm]	4,200	4,000	3,800	3,600	3,600	2,500
Installed drive	[kw]	90	160	200	250	315	400
Fineness d98	[µm]	2-50	4-50	5-50	5-50	6-50	6-50
Sealing air approx.	[m3/h]	1200	2,000	3,000	4,000	5,000	6,000
A	[mm]	2,800	3,200	3,800	3,000	4,300	4,700
B	[mm]	2,950	3,400	4,100	3,500	4,700	5,200
C	[mm]	1,700	2,000	2,300	2,500	2,950	3,500

als such as calcium carbonate, Dolomite, chalk, Barite, kaolin,

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Twisterplex Turbo Hybrid super fine Air classifier

Latest technology is used to made ultrafine turbo hybrid classifier TTH, that properly meet the most demanding product ultrafine.

Special turbo-hybrid rotors designing enable us to manufacture large diameter and length.

By TTH, we can achieve to increase the speed up to 100 m/s to reach the high capacity and best distribution curve.

ADVANTAGES:

Very sharp cut points at highest yields

-capability of Increase the rotor's speed to 105m/s

-Cut point down to d98

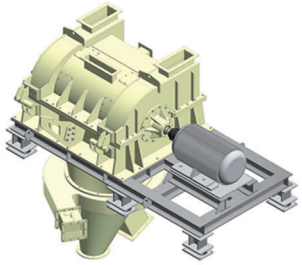
-Production of ultrafine on an industrial scale which in the past was only by wet processing and drying. Investment return in very short time.

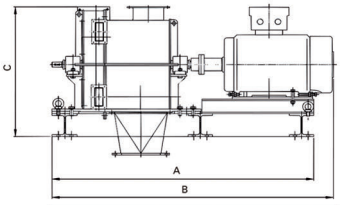
-Special vanes designing for reach to lower rotor speed of the TTH classifier rather than the last generation of classifiers.

Low maintenance cost and easy maintenance.

-double discharge reduces pressure loss and safes energy cost by over 40%.

- Dynamic air sealing adapted to rotor speed minimizes risk of oversize contamination.





DIMENSIONAL DRAWING

Application areas:

TTH classifier is designed for classify ultrafine industrial and minera
Graphite, Talcum, toner and similar products.

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Fineplex Air Classifier Model: KFS

FINEPLEX AIR CLASSIFIER KFS

Deflector-wheel classifier for the medium to fine separation range between approx. d97 = 20 – 200 µm.

The Fineplex is a cost effective classifier characterised by its high precision of cut, high fines yield, low energy consumption and ease of adjustment. The cut point can be adjusted by means of a frequency converter as a function of the classifying wheel speed.

The KFS classifier can be operated in the following

modes :

Through – air mode Circuit – air mode with approx. 10% leakage air.

Features

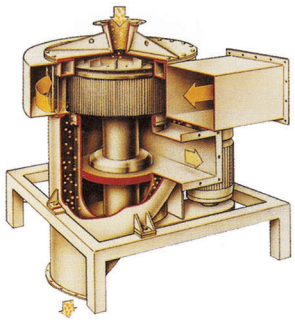
Product feed by gravity Good precision of cut even with high feed rates, up to 2 kg feed per m3 of classifying air Maintenance – friendly design Different classifying wheels for coarse and fine separation Rinsing air fan for classifying wheel gap

Applications

Feldspar, quartz, nepheline and wollastonite, calcium carbonate.

Bulk chemicals, Salt, Sodium carbonate, Protein shifting,Wheatlour, Soy

The Stratoplex KFS is also available in a special design for processing products that tend to deposit such as hydrated lime.



Product line Fineplex KFS	Type	630	800	1000	1250	1500	1800
Scale-up factor F=approx.		4	6.4	10	16	25	33
Drive power	kw	15	22	37	55	90	132
Speed / coarse	rpm	1000	800	630	500	420	350
Speed / fine	rpm	2000	1600	1250	1000	840	700
Nominal air flow rate	m^3/h	10000	16000	25000	40000	64000	82000
Fineness d97=	µm	11	13	15	17	20	25
Fines yield, max.*)df97							
20 µm	in t/h	1.5	2.5	3.8	4.5	-	-
63 µm	in t/h	4	6	9	11	15	25
90 µm	in t/h	5	8	11	13	30	45

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Sepraplex Air Separator KSUV Model: KSUV

This machine is made by using most up to date technology in the world and
according to standards that introduce to air industry at the different size in Iran.

These are the advantages of Kimia Machine Separator.

- High efficiency over a wide range of operating conditions.
- Excellent cut at high throughput (cut from 45 - 400 micron).
- Simple setting of product fineness.
- Steeples regulation of fineness during operation.
- Wide range of control with accurate setting of product and fineness.
- Simple dismounting of mill bearings.
- Safe and reliable operation by study support of the rotating parts
- Full use of mill capacity.

Air separator model	K.A.M - SUV 1200	K.A.M - SUV 2000	K.A.M - SUV 2500	K.A.M - SUV 3000	K.A.M - SUV 3500	K.A.M - SUV 4200	K.A.M - SUV 5000
Fan Drive power [kw]	5.5	15	22	30	37	45	75
Distribution Table Drive power	3	7.5	15	22	30	37	45-55
Classifier speed [rpm]	500	450	370	280	240	210	180
Feed [t/h]	0.3-4	2-8	5-15	8-30	13-40	15-70	20-90
Fineness df 97=[µm]	45-150	45-200	45-300	75-300	90-300	120-300	120-350
Fineness yield*) df97 [t/h]							
45[µm]	0.2-1	1-2	3-5	-	-	-	-
63[µm]	0.2-1.2	1-3	3-6	-	-	-	-
90[µm]	0.2-1.4	1-3.5	3-7	4-8	5-10	-	-
120[µm]	0.2-1.5	1-3.7	3-7.5	4-9	5-12	10-20	20-35
150[µm]	0.2-1.7	1-4	3-8	4-10	5-13	10-25	20-45
200[µm]	0.2-1.9	1-4.3	3-8.5	4-12	5-15	10-30	20-60

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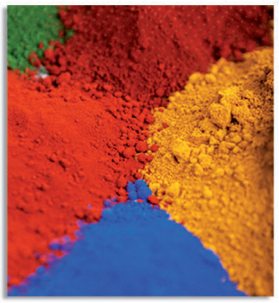
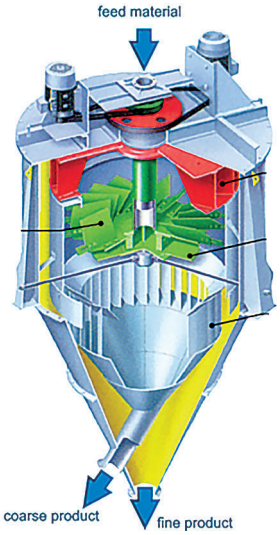


Some materials processed with Kimia Machine Alborz air separator:

Asbeston, Ash, Barite, Bauxite, Burnt lime, Kaolin, Fertilizer, Graphite, Gypsum, Lime hydrate, Lime stone, Fireclay, Magnesite, Slag, Slate, Bentonite, Calcium Carbonate, Talcum. Silica, Feldspar, Tobacco powder etc.



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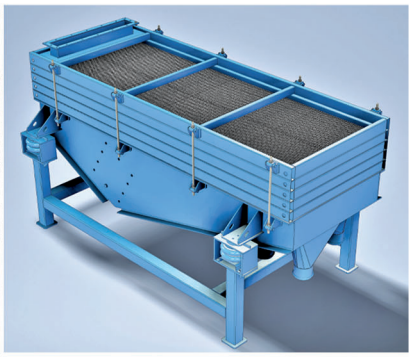
Tumbler plex and Multi deck plex

Tumbler screener uses elliptical action which aids in screening of even very fine materials. The fine particles stay toward the center and the larger go to the outside, here this machine have the advantage of Container barrel with different outlet doors at each of the sorting level.effective diameter 2000mm to 2600 mm.
Power 3 - 5/5 Kw.

Multi Deck plex: The modular construction allows 6 machine sizes, from 0.35 m² to 5.6 m². Up to 19 screen decks can be stacked and combined to various screen units. The maximum screen area is about 100 m². With the addition of multiple decks, ball cleaning decks and ultrasonic vibration system even coarse products can be sieved at high capacity to very fine separation.



Multi deck plex	5/7	5/14	7/20	10/21	10/28	20/28
Width (mm)	500	500	700	1000	1000	2000
Length (mm)	700	1400	2000	2800	2800	2800
Screen area per deck (m2)	0.35	0.7	1.4	2.1	2.8	5.6
Max. area (m2)	2.5	5	15	25	30	100
Motor power (kw)	2 x 0.2	2 x 0.5	2 x 1	2 x 1.7	2 x 1.7	2 x 4

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Vibrating Screen

Vibrating Screen Types We design and manufacture vibrating screens and feeders. We supply our vibrating screen machines to collieries, washing plants and other facilities where screening is required. our screen aquipped with air springs instead of solid rubber or metal springs.

We manufacture the following:

- Slurry Dewatering Vibr ating Screens
- Classification Vibrating Screens
- Fines Classification Vibrating Screens
- Vibrating Feeders

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