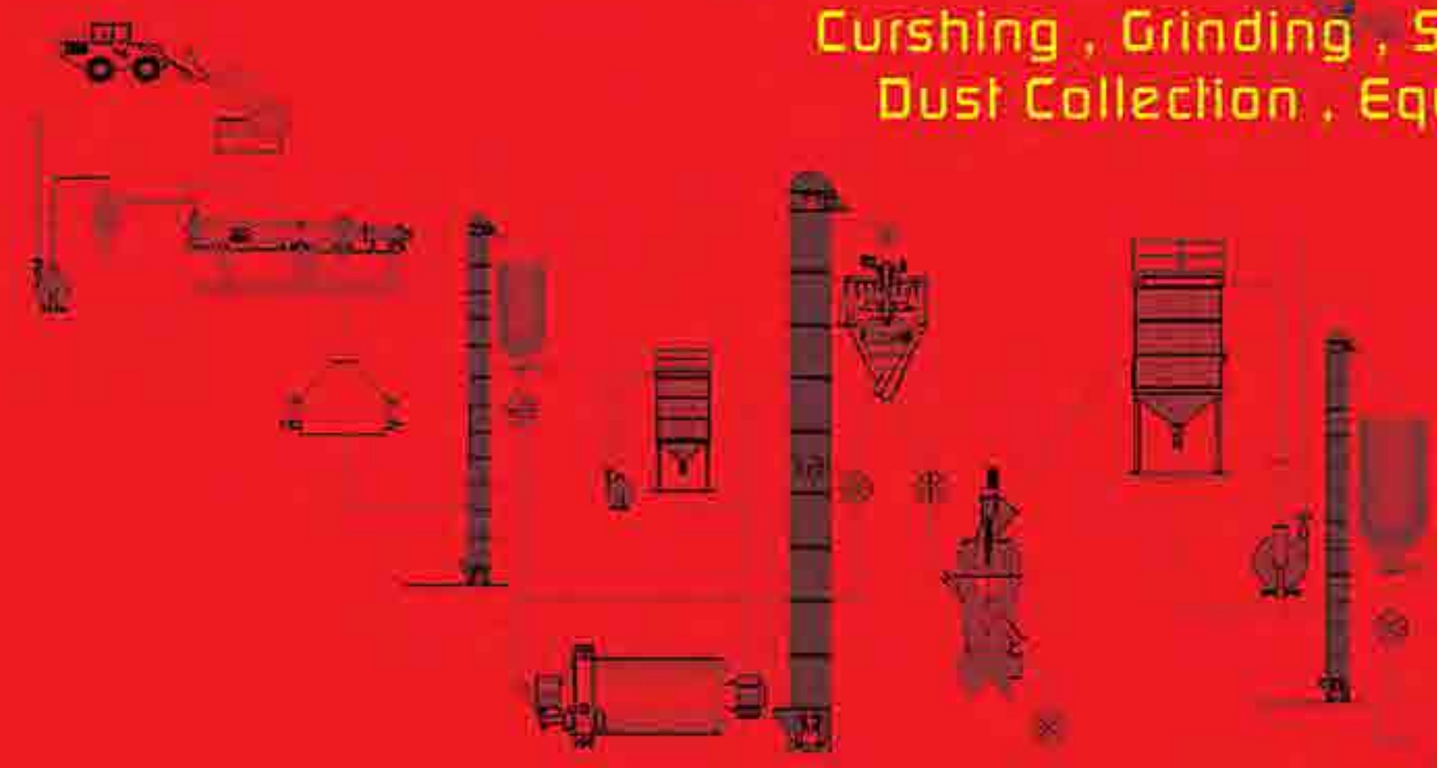
MES MINE MACHINERY®

Mineral Processing Machinery

Crushing , Grinding , Separating
Dust Collection , Equipment



CANADIAN Designed & Made

www.mesmine.com

Ball and Rod Mills

The Mes mine 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.

Steel Lining and Grinding Media

Mill Size(m)	Diameter (mm)	Length (mm)	Motor (kw)	Weight (ton)
1.6 x 3.2 - 4.5	1600	3200 - 4500	110 - 132	16 - 19
2 x 3 - 6	2000	3000 - 6000	132 - 250	23 - 35
2.4 x 4 - 6	2400	4000 - 6000	250 - 450	44 - 55
2.85 x 4 - 6	2850	4000 - 8000	450 - 710	69 - 90
3.2 x 6 - 10	3200	6000 - 10000	710 - 1200	120 - 200

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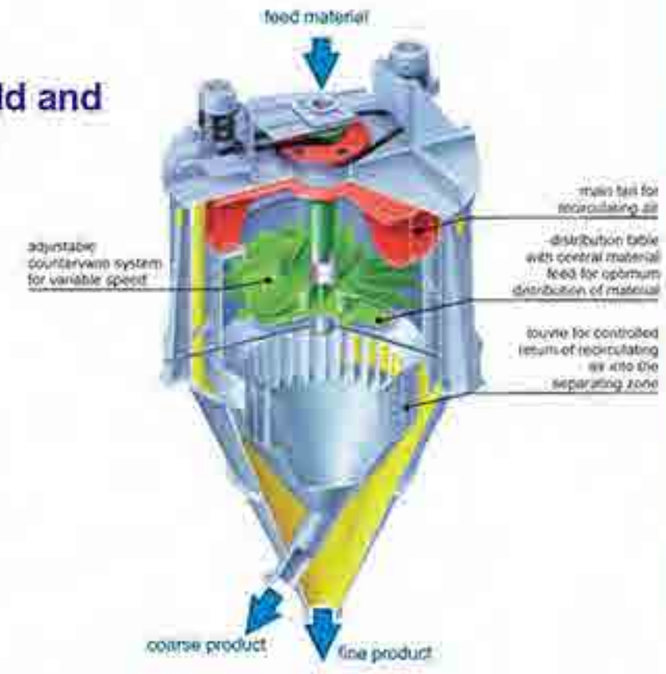
Sepraplex Air Separator KSUV

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

These are the advantages of Mes Mine 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.



Some materials processed with Mes Mine 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.

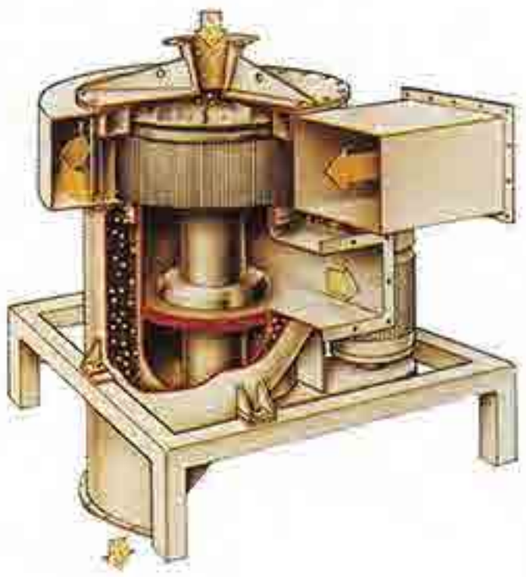
Air separator model	K.A.M - SUV 1200	K.A.M - SUV 2000	K.A.M - SUV 2500	K.A.M - SUV 3000	K.A.M - SUV 3500	K.A.M - SUV 4200	K.A.M - SUV 5000
Fan Drive power [kw]	5.5	15	22	30	37	45	75
Distribution Table Drive power	3	7.5	15	22	30	37	45-55
Classifier speed [rpm]	500	450	370	280	240	210	180
Feed [t/h]	0.3-4	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

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.

Applications

Feldspar, quartz, nepheline and wollastonite, calcium carbonate.
Bulk chemicals, Salt, Sodium carbonate, Protein shifting, Wheat flour, Soy
The Fineplex 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	1.7	2.8	3.6	5.0	7.3	-
63 µm	in t/h	4	6.5	9	12	30	45
90 µm	in t/h	7	10	14	20	40	60

HURRICOPLEX CLASSIFIER MILL

Applications

Hurricoplex classifier mills are universal in use for materials to a Mohs' hardness of approx. 3.5, when the requirements call for extremely high end-product fineness values at the lowest possible energy consumption.

Features

- Optimum accessibility.
- Easy cleaning; a big plus if the products is changed often.
- Designed for processing sticky products that tend to deposit.
- Special fluidization equipment at critical points.
- Deposit-free and gentle processing of pigments, wax, resins, powder coatings, etc.
- High air flow rate = cool grinding.
- Excellent precision of cut, steep particle size distributions.
- Stable classifying character is tics: once set, the classifying fineness remains constant.

Product examples

Synthetic resins (epoxy, phenolic, acrylic, polyester resins) Wax Plastics and polymers such as PVC and PTFE half-polymers Precipitated products such as SiO2 , Al2 O3 , aluminum hydroxide Sugar, cocoa blends Lactose, proteins, Thickening agents, gelatin, Animal feed, Pigments, Disintegration of powers for protein, shifting , Phosphates

Product line Hurricoplex HPS	Type	315	500	630	750
Scale-up factor F=approx.		2	4.2	6.5	9
Beater unit Ø	mm	630	1000	1250	1530
Max. mill speed	rpm	3350	2250	1800	1460
Mill drive	kw	30	75	132	200
Fineness d97=µm		8-120	10-180	10.200	15-200
Ultraplex KTP	**Type**	**315**	**500**	**630**	**750**
Max.wheel	rpm	4000	2250	2000	1600
Classifier drive	kw	11	22	30	37
Air flow rate	rpm	3000	7500	12000	18000

MES MINE MACHINERY®

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 residence time, moisture of content products and product fineness.

Model	DP1	DP2	DP3	DP4	DP5	DP6	DP7
Scaling Factor	1	2	4	8	16	24	30
Milling Motor (kw)	11	22	45	90	200	280	355
Sifting Wheel Motor (Kw)	1.5	2.2	5.5	7.5	15	22	37
Outlet Air Flow (80 C, m3/min)	25	50	100	200	400	600	800
Evaporation (200 C, kg/h)	79	158	316	632	1264	1896	2528
Total Height (mm)	2540	3500	3600	3800	5400	6300	7300
Common Base (mm x mm)	1400 x 630	1700 x 930	2000 x 1300	2300 x 1500	3440 x 2330	4200 x 3000	5000 x 4000

Vertical & Raymond Roller Mill

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

Vertical Roller Mills

Model	Table diameter(mm)	Number of rollers	Capacity (t/h)	Motor power(kw)
VRM120	1200	2	10	132/11
VRM160	1600	2	25	250/15
VRM200	2000	2	40	400/22
VRM260	2600	3	60	630/30
VRM300	3000	3	95	1000/75
VRM350	3500	4	150	1500/110
VRM400	4000	4	200	2000/160

Raymond Roller Mills

Model	Roller(mm) Number	Roller(mm) Diameter	Fineness of product(micron)	Power for main roller mill (Kw)
RRM4	4	310	45 - 400	37
RRM5	5	410	45 - 400	75
RRM6	6	450	45 - 400	132

Model	Fineness (micron) Capacity (t/h) 44	75	125	250
RRM4	1.3 - 3	1.8 - 3.6	1.8 - 3.6	1.8 - 3.6
RRM5	1.8 - 4	2 - 4.5	2 - 4.5	2 - 4.5
RRM6	2.6 - 8	4.9 - 9	4.9 - 9	4.9 - 9

Ultraplex single & multi-wheel classifier

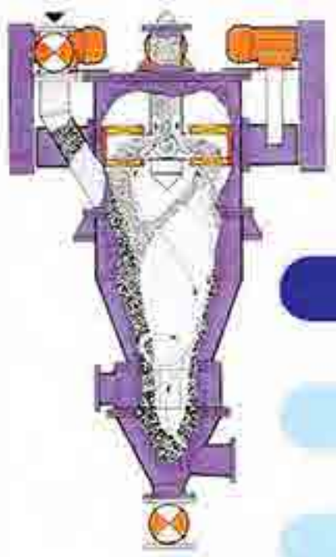
The multi-wheel Ultraplex classifier operates in conjunction with a single cyclone/ filter and fan set so represents accost effective method of achieving superfine separation at high throughput rates.

Dependent on the end-product fineness, the feed product and the machine size, the feed rate of Ultraplex multi wheel classifiers range between about 150 and 30,000 kg/h.

Because of the high throughput rates, Ultraplex multi-wheel classifiers can be combined in circuit with correspondingly large mills.

Application area

Especially developed for ultrafine classifying operations, KTP multi-wheel classifiers are ideal for processing metal powders, mineral powders, abrasives, toner and wax.



Ultraplex KTP model	315	315/3	315/6	500	500/3	500/4	630	630/4
Scale-up factor F=approx	2.5	7.5	15	6.25	19	25	10	40
Drive power[kw]	11	3×11	6×11	22	3×15	4×15	30	4×22
Max. speed[rpm]	4000	4000	4000	2400	2400	2400	2000	2000
Max. Air flow rate [m3/h]	3000	9000	18000	7500	22500	30000	12000	48000
Fineness d97= ca.[µm]	6-150	6-150	6-150	8-150	8-150	8-150	9-200	9-200
Fine yield max*) df978µm in [t/h]	0.35	1.0	2.1	0.80	2.4	3.2	-	-
20µm in[t/h]	0.70	2.1	4.2	1.75	5.2	7	2.8	11
45µm in [t/h]	1.0	3	6	2.5	7.5	10	4.0	16

*)Feed material with 70% < df97