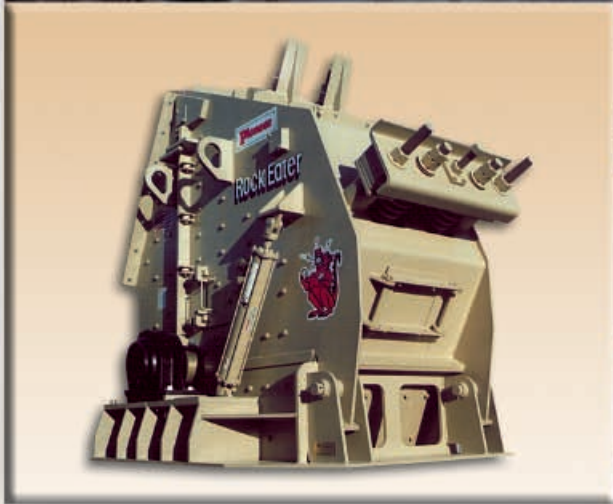
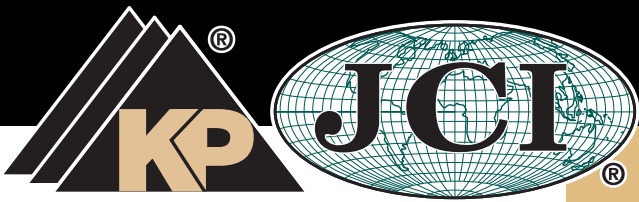




**Your One Source**



**CRUSHING**  
**CRUSHING**



The **KPI** and **JCI** series of Jaw, HSI, Cone and VSI crushers are designed for years of reliable, productive and low cost operation, giving you the profitable edge you need in today's markets.

## Jaw

**2640, 2650, 3055, 3144,  
3352, 4450 and 3165**  
**Pages 4 & 5**

Simplicity of design, ruggedness of construction and high operating speeds combine to make the Pioneer® overhead eccentric jaw crusher one of the finest available for high production, primary crushing applications. Characteristics like...

- Hydraulic adjustable Closed Side Setting
- Increased stored energy
- Reliable one-piece style construction
- Reduced maintenance

...deliver the production performance and efficiencies required in today's operations.



## Cone

**KODIAK® and LS 200 / 300**  
**Pages 6 & 7**

JCI® roller bearing cone crushers utilize...

- Increased stroke
- Increased speed
- Increased chamber angle

... to deliver the process performance and efficiencies you need and expect. Combine our unmatched durability, ease of maintenance and lower operating costs ensure you years of productive and profitable operation.



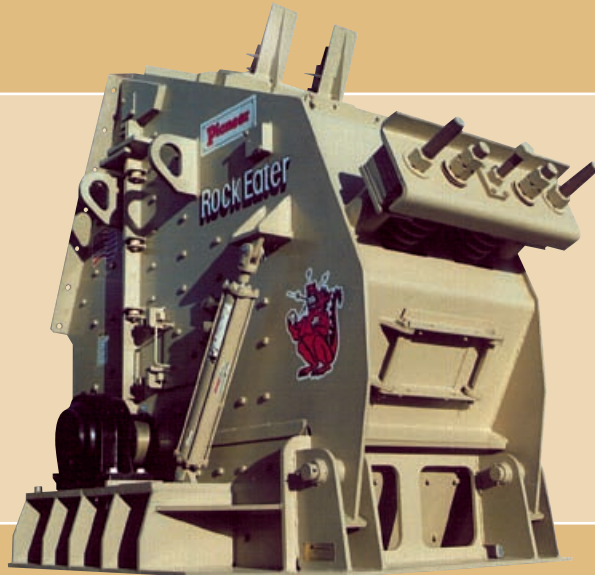
## Horizontal Impact

**4233, 4240, 4250 and 5260**  
**Pages 8 & 9**

Pioneer® horizontal shaft impact crushers are designed for recycling concrete, asphalt and traditional aggregates like limestone. Characteristics like...

- Efficient MPR style rotor
- Increased stored energy
- Reduced maintenance
- Andreas style
- New Holland style

...combine to meet your operations production and profitability requirements.



## Vertical Impact

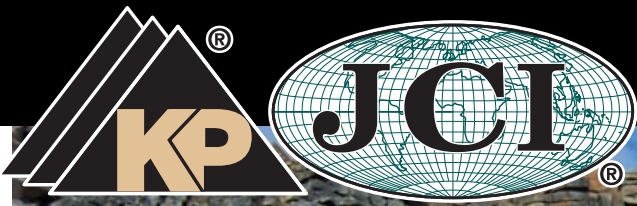
**1500, 2500, 82, 4500 and 120**  
**Pages 10 & 11**

Innovative design and ruggedness of construction combine to make the Pioneer® vertical shaft impact crusher one of the finest available for high production, tertiary crushing applications. Characteristics like...

- Hybrid rock shelf design
- Dramatically reduced wear costs
- Increased production of spec material
- Fully autogenous or standard configurations

...deliver the production performance and efficiencies required to meet today's stringent spec material requirements.





## VALUE

## FEATURES

### Integrity

### Adjustability

### Reliability

### Profitability

Over 80 years of design and field experience combine to produce the most reliable, dependable and low cost primary crushers for your hard rock and recycling needs.

Available in sizes ranging from 15" x 24" to 44" x 50" and in two configuration styles **Legendary®** and **Vanguard®**, our line of jaw crushers offer you the best value in the industry today! That's the Pioneer® difference.

Give us a call!



### Integrity

The pitman is made of high-quality cast steel and is propelled by two massive cast steel or iron flywheels. A very large eccentric shaft forging and four large spherical roller bearings that are all of the same size ensure the greatest reliability even under the most severe crushing conditions.



### Adjustability

Many types of jaws dies have been developed to optimize performance characteristics in applications such as conventional quarries, mines, gravel pits, and recycling of demolition material and asphalt. Our innovative bolt-on die retention system allows you to quickly and efficiently matching the correct die configuration to the materials produced.



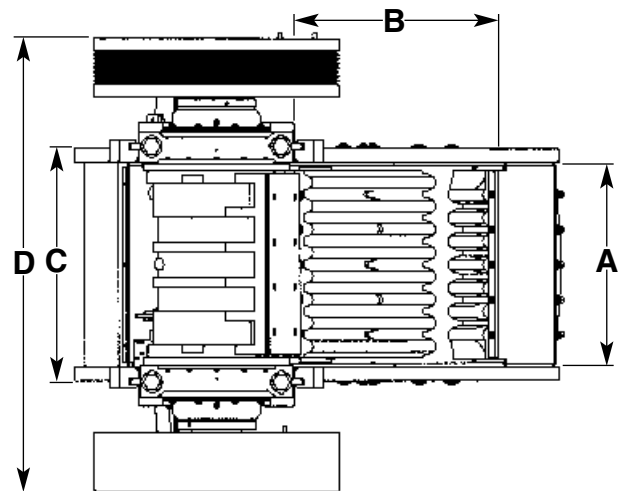
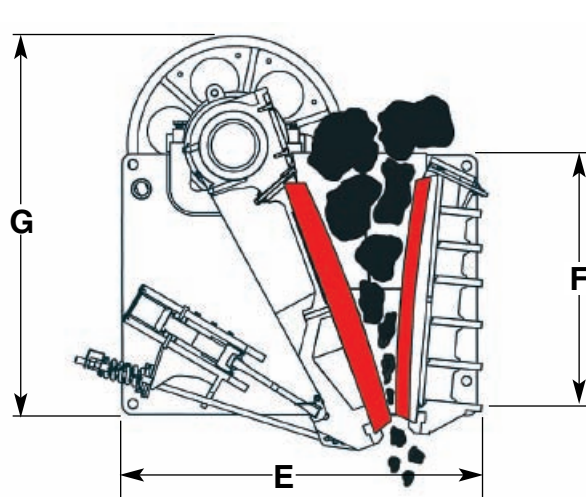
### Reliability

Our jaw crushers incorporate the largest eccentric shaft bearings in the industry. With higher load capacities, efficient labyrinth seals and saddle-block bearing support structures, Pioneer® jaw crushers set new industry standards for extended bearing life.



### Profitability

Pioneer® delivers unmatched crushing capacity through efficient design, not bulk. Features like increased stroke, additional stored energy, dependable gradation and lower operating cost combine to ensure you years of dependable and profitable operation.



## APPLICATION

## SPECIFICATIONS

### PIONEER JAW CRUSHERS APPROXIMATE JAW CRUSHERS GRADATION—OPEN CIRCUIT

Test Sieve Sizes (in.)	APPROXIMATE GRADATIONS AT PEAK TO PEAK CLOSED SIDE SETTINGS													Test Sieve Sizes (mm)	
	3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"		
12"												100	98	95	305
10"										100	97	95	90	254	
8"									100	96	92	85	75	203	
7"	Values Are Percent Passing								100	97	92	85	76	65	178
6"						100	98	93	85	74	65	53	152		
5"					100	97	95	85	73	62	52	40	127		
4"				100	96	90	85	70	56	45	38	28	102		
3"			100	93	85	75	65	50	38	32	27	23	76.2		
2 1/2"		100	95	85	73	62	52	38	31	24	22	17	63.5		
2"	100	96	85	70	55	47	39	28	24	20	17	13	50.8		
1 1/2"	100	93	85	67	49	39	33	27	21	18	15	10	38.1		
1 1/4"	96	85	73	55	39	31	27	23	17	15	13	10	31.8		
1"	85	69	55	40	29	24	20	17	14	12	10	8	25.4		
3/4"	66	49	39	28	21	18	15	13	11	9	8	6	19.0		
3/8"	41	29	24	19	14	12	10	9	7	6	6	5	12.7		
3/16"	28	21	18	14	11	9	8	7	5	5	5	4	9.53		
1/4"	18	14	12	10	7	7	6	5	4	4	4	3	6.35		
#4	12	10	9	7	5	5	4	4	3	3	3	2	1		
#8	6	6	5	5	4	4	3	3	2	2	2	1	0.5		

### PIONEER VANGUARD JAW CRUSHERS HORSEPOWER REQUIRED AND APPROXIMATE CAPACITIES IN TPH

SIZE	HP Required (Minimum)	APPROXIMATE GRADATIONS AT PEAK TO PEAK CLOSED SIDE SETTINGS												
		3/4"	1"	1 1/4"	1 1/2"	2"	2 1/2"	3"	3 1/2"	4"	5"	6"	7"	8"
2640	125 160						140	160	180	200	240			
2650	150 190					165	188	211	235	282				
3055	200 250						265	300	334	402	471	528		
3144	150 190						212	240	267	320	373	426		
3165	200 250						265	305	372	459	530	611	692	
3352	200 250							318	360	416	484	553		
4450	250 310								423	492	574	654	735	816

**NOTE:** \*Based on material weighing 2,700 lbs. per cubic yard. Capacity may vary with the material characteristics.  
\*\*Larger settings may be obtained with other than standard toggle plate...consult Factory.

### DIMENSIONS

MODEL	2640	2650	3055	3144	3165	3352	4450
Dim. (in.)	40"	50"	55"	44"	65"	52"	50"
A	1016mm	1270mm	1397mm	1118mm	1651mm	1321mm	1270mm
B	26"	26"	30"	31"	31"	33"	44"
	660mm	660mm	762mm	787mm	787mm	838mm	1118mm
C	45.5"	55.5"	63"	51"	72"	59"	59.5"
	1156mm	1410mm	1600mm	1295mm	1829mm	1499mm	1511mm
D	93"	105"	108"	94"	116"	105"	116"
	2362mm	2667mm	2743mm	2388mm	2946mm	2667mm	2946mm
E	88"	88"	96"	93"	90"	106"	124"
	2235mm	2235mm	2438mm	2362mm	2286mm	2692mm	3150mm
F	52"	52"	65"	67"	60"	75"	95"
	1321mm	1321mm	1651mm	1702mm	1524mm	1905mm	2413mm
G	79"	79"	96"	98"	94"	109.5"	132"
	2007mm	2007mm	2438mm	2489mm	2388mm	2781mm	3353mm

### GENERAL

MODEL	Jaw Opening (Gap)	Jaw Width	Moving Jaw (Overall Depth)	Stationary Jaw (Overall Depth)	Weight (lbs.)	Power/ HP	RPM	Stroke
Dim. (in.)	26"	40"	53"	49"	29,500	Elec / 125	285	1 1/4"
2640	660mm	1016mm	1346mm	1244mm	13,393kg	Diesel / 160	260	1 1/4"
2650	26"	50"	53"	49"	32,000	Elec / 150	260	1 1/4"
	660mm	1270mm	1346mm	1244mm	14,528kg	Diesel / 190	max.	1 1/4"
3055	30"	55"	60.5"	59.5"	50,000	Elec / 150-200	250	1 1/2"
	762mm	1397mm	1537mm	1511.3mm	22,700kg	Diesel / 190-250	max.	1 1/2"
3144	31"	44"	65"	62"	43,500	Elec / 150	260	1 1/2"
	787mm	1118mm	1651mm	1575mm	19,749kg	Diesel / 190	max.	1 1/2"
3165	31"	65"	60.5"	56"	56,000	Elec / 200	250	1 1/2"
	787mm	1651mm	1537mm	142 mm	25,402kg	Diesel / 250	max.	1 1/2"
3352	33"	52"	74"	69"	65,000	Elec / 200	225	1 1/2"
	838mm	1321mm	1880mm	1753mm	29,555kg	Diesel / 250	max.	1 1/2"
4450	44"	50"	100"	94"	101,900	Elec / 250	225	1 1/2"
	1118mm	1270mm	2540mm	2388mm	46,262kg	Diesel / 310	max.	1 1/2"

**NOTE:** Specifications subject to change without notice.



## VALUE

## FEATURES

### Efficiency

### Adjustability

### Productivity

### Durability

For high productivity, low operating and wear costs, long service life, and high product yield with desired fines, there's no better choice than a **JCI® Cone Crusher**. JCI leads this market with its high performance **LS** and **Kodiak® Series** of cone crushers for the aggregate and mining markets.

Our cone crushers feature a unique combination of crusher speed, throw, and cavity design to provide a wider range of application suitability. From lime-stone to taconite, from ballast production to manufactured sand, and from small portable plants, JCI cone crushers provide unbeatable performance in secondary, tertiary, and quaternary applications.



### Efficiency

Our precision roller bearing design generates less friction thus providing more energy for crushing rock and maintains close tolerances over the entire life of the bearing unlike other bearing or bushing designs.



### Adjustability

Dual closed-side-setting motors are controlled by a one-button electric controller provides positive adjustment under load and consistent and accurate gradation output.



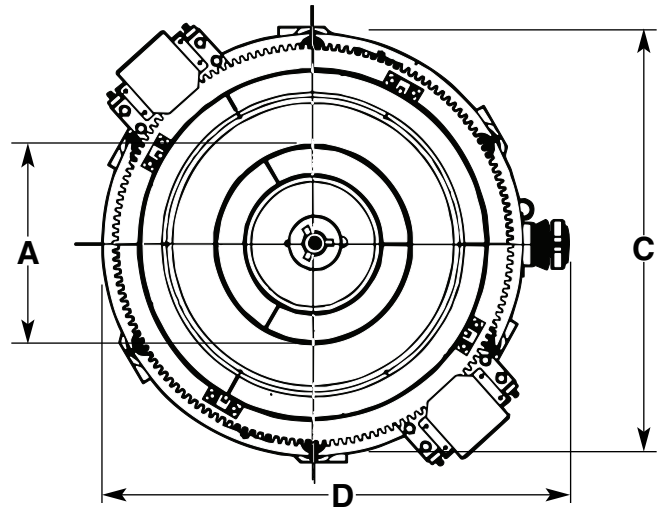
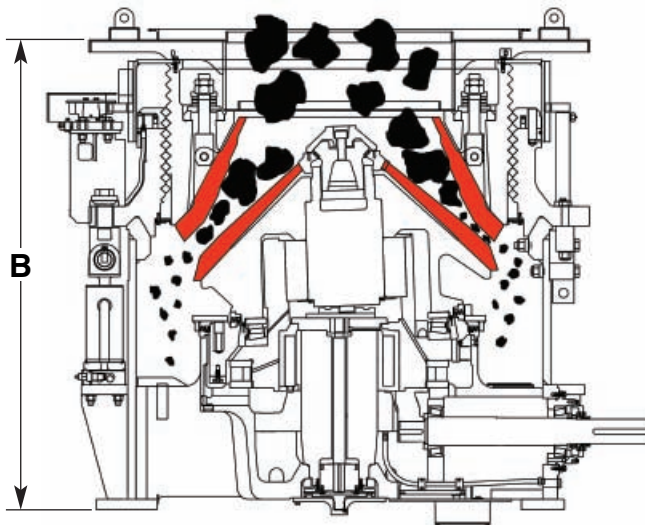
### Productivity

Unlike our competition, our patented balancing system eliminates any need to rebalance the cone over the entire life of the crusher. Less down time, more production equals more PROFITABILITY!



### Durability

Durability of JCI's Kodiak heavy-duty cone crushers lies within our two-piece cone head design that incorporates high strength shafting made of 4340 high alloy steel securely "shrink fitted" to the cone head. This is the JCI difference!



## APPLICATION

### GRADATION CHART

Product Size	Crusher Closed Side Setting											
	5/16"	3/8"	7/16"	1/2"	5/8"	3/4"	7/8"	1"	1 1/4"	1 1/2"	1 3/4"	2"
	7.94 mm	9.52 mm	11.11 mm	12.7 mm	15.87 mm	19.05 mm	22.22 mm	25.4 mm	32 mm	38.1 mm	44.5 mm	50.8 mm
4"												100
3 1/2"											100	96
3"										100	95	90
2 3/4"										98	92	86
2 1/2"									100	95	88	81
2 1/4"									97	91	83	74
2"								100	94	86	76	65
1 3/4"							100	99	89	79	66	55
1 1/2"						100	99	97	82	68	56	45
1 1/4"					100	99	95	90	72	56	46	38
1"				100	99	95	87	79	60	45	36	29
7/8"			100	99	95	88	80	70	49	38	30	25
3/4"		100	97	95	91	83	71	61	41	32	26	21
5/8"	100	98	94	90	85	73	58	49	34	28	22	18
1/2"	99	95	89	85	75	63	50	42	28	23	19	16
3/8"	91	85	75	69	63	51	42	33	21	17	14	12
5/16"	85	75	65	61	56	43	35	27	19	15	13	10
1/4"	74	63	52	50	45	37	29	23	16	13	11	9
4M	58	51	42	36	33	28	21	18	14	11	9	7
5/32"	50	42	36	30	28	23	18	15	12	10	8	6
8M	40	35	30	26	24	20	16	12	9	7	5	4
10M	35	31	26	22	20	17	14	10	8	6	4	3
16M	28	24	21	17	15	13	10	8	6	4	3	2
30M	21	18	15	11	9	8	6	5	4	3	2	1.5
40M	18	15	13	10	8	7	5	4	3	2	1.5	1
50M	14	12	11	8	7	6	4	3	2	1.5	1	0.8
100M	11	9	8	7	6	5	4	3	1.5	1	0.5	0.5
200M	8	7	6	6	5	4	3	2	1	0.5	0.5	0.3

Estimated product gradation percentages at setting shown.

## SPECIFICATIONS

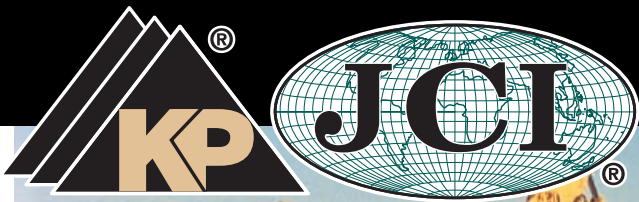
### DIMENSIONS

MODEL	K200	K300	K400
Dim. (in.)	54"	54"	66"
<b>A</b>	1372mm	1372mm	1676mm
<b>B</b>	74"	83"	89"
	1880mm	2108mm	2261mm
	79"	88.5"	96"
	2007mm	2248mm	2438mm
	20"	24"	24"
	508mm	610mm	610mm
<b>C</b>	78"	84"	94.5"
	1981mm	2134mm	2400mm
<b>D</b>	93"	96"	104"
	2362mm	2438mm	2642mm
	34"	30"	30"
	864mm	762mm	762mm

### GENERAL

MODEL	Head Dim. (in.)	RPM	HP	Weight (lbs.)
<b>K200</b>	40"	800-900	Elec. 200	33,500 lbs.
	1016mm			15,196kg
<b>K300</b>	45"	850-950	Elec. 300	45,500 lbs.
	1143mm			20,639kg
<b>K400</b>	54"	850-950	Elec. 400	58,600 lbs.
	1372mm			26,580kg

NOTE: Specifications subject to change without notice.



## VALUE

## FEATURES

Adaptability

Reliability

Accessibility

Versatility

**Pioneer® Horizontal Shaft Impact Crushers** are built with over 50 years of design and field experience and deliver unbeatable performances in primary, secondary, tertiary and recycling applications.

Our impact crushers feature a unique combination of heavy rotor design, wear material and crushing chamber design. This combination has proved revolutionary in improving capacity, product quality and in reducing operating, reducing wear costs and achieving the highest levels of profitability.

Give us a Call!



### Adaptability

Some of the largest feed opening sizes found in the industry optimize material transition making our impact crushers well suited for all your recycling and aggregate processing applications.



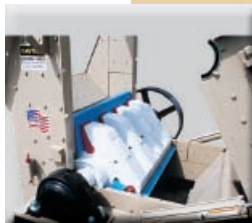
### Reliability

A sequentially welded, fabricated base provides you with maximum strength for extended base life. Our heavy-duty crusher shaft and bearing assembly and innovative rotor retention system combine to allow our impact crushers to withstand the day to day rigors of severe impact applications.



### Accessibility

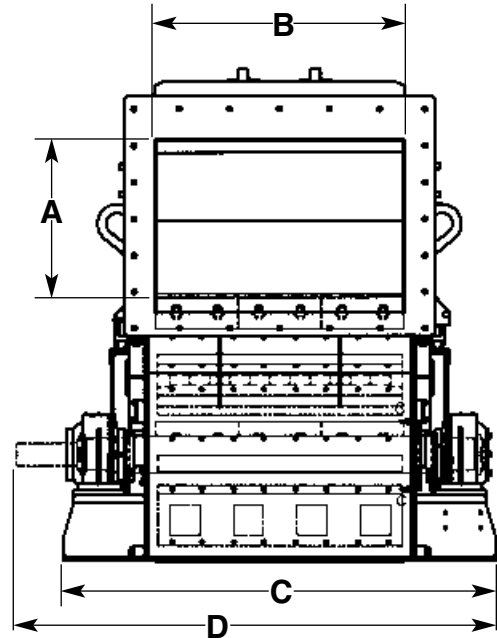
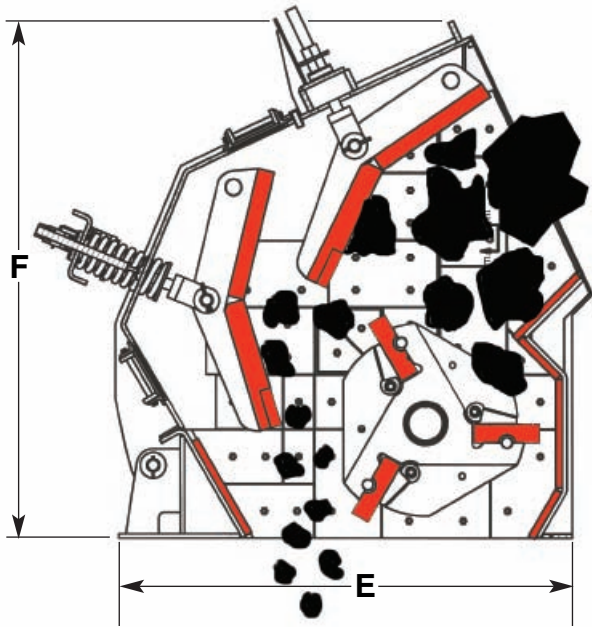
Less downtime equates to more profitability! Our rotor housing hydraulically opens with one simple motion and provides easy access to the crushing chamber for periodic maintenance.



### Versatility

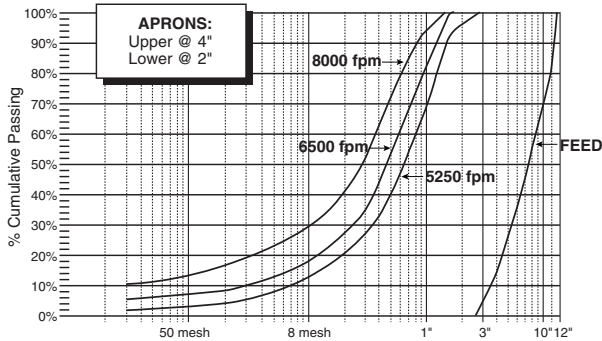
The Maximum Performance Rotor (MPR) features solid rotor integrity with access characteristics of a segmented rotor. Pioneer® offers you two, three and four bar configurations for maximum material penetration and control of particle size.

# HORIZONTAL IMPACT



## APPLICATION

### APPROXIMATE OUTPUT GRADATIONS - OPEN CIRCUIT



**NOTE:** \*Capacity depends on feed size and gradation, type of material, etc.  
\*\* Limestone and hard rock feed sizes are based on secondary applications.

### MAXIMUM FEED SIZE

Crusher Size		Recycle	Primary Limestone	Secondary Limestone	Primary Hard Rock	Secondary Hard Rock	Minimum Lower/Upper Apron Setting
4233 - 3 Bar	in mm	24 x 24 x 12 610 x 610 x 305	16 - 18 406 - 457	8 - 10 203 - 254	14 - 16 356 - 406	6 - 8 152 - 203	1/2 25 / 50
4240 - 2 Bar	in mm	27 x 27 x 12 686 x 686 x 305	18 - 21 457 - 533	10 - 12 254 - 305	15 - 18 381 - 457	8 - 10 203 - 254	1/2 25 / 50
4240 - 3 Bar	in mm	27 x 27 x 12 686 x 686 x 305	18 - 21 457 - 533	10 - 12 254 - 305	15 - 18 381 - 457	8 - 10 203 - 254	1/2 25 / 50
4250 - 3 Bar	in mm	30 x 30 x 12 762 x 762 x 305	18 - 21 457 - 533	10 - 12 254 - 305	15 - 18 381 - 457	8 - 10 203 - 254	1/2 25 / 50
5260 - 3 Bar	in mm	36 x 36 x 12 914 x 914 x 305	21 - 24 533 - 610	10 - 12 254 - 305	15 - 18 381 - 457	8 - 10 203 - 254	1/2 25 / 50
5260 - 4 Bar	in mm	36 x 36 x 12 914 x 914 x 305	18 - 21 457 - 533	10 - 12 254 - 305	15 - 18 381 - 457	8 - 10 203 - 254	1/2 25 / 50

## SPECIFICATIONS

### DIMENSIONS

MODEL	4233	4240	4250	5260
Dim. (in.)	38"	36"	38"	36"
A	965mm	914mm	965mm	914mm
B	33"	40"	50"	60"
	838mm	1016mm	1270mm	1524mm
C	69"	75"	86"	96"
	1753mm	1905mm	2184mm	2438mm
D	77"	84"	96"	110"
	1956mm	2134mm	2438mm	2794mm
E	87"	87"	83"	106"
	2210mm	2210mm	2108mm	2692mm
F	92"	92"	92"	95"
	2337mm	2337mm	2337mm	2413mm

### GENERAL

MODEL	Rotor (Dim. in.)	RPM	FPM	HP	Weight (lbs.)
4233	42 dia. x 33 w. 1069mm x 838mm	362-725	4000-8000	Elec. / 100-150 Diesel / 225	23,300 10,570kg
4240	42 dia. x 40 w. 1067mm x 1016mm	2-bar, 545-725 3-bar, 365-725	6000-8000 4000-8000	Elec. / 150-200 Diesel / 300	22,500 10,206kg
4250	42 dia. x 50 w. 1067mm x 1269mm	362-725	4000-8000	Elec. / 200-250 Diesel / 375	28,200 12,792kg
5260	52 dia. x 60 w. 1320mm x 1523mm	330-600	4000-8000	Elec. / 300-400 Diesel / 600	39,000 17,691kg

**NOTE:** Specifications subject to change without notice.



## VALUE

## FEATURES

### Accessibility

### Versatility

### Profitability

### Adjustability

**Pioneer® Vertical Shaft Impact Crushers** set the industry standard for producing the most desired product for the least cost per ton. Our innovative design offers you benefits like...

- Lower HP / Ton ratio
- Higher production
- More consistent gradations

... to improve the bottom line of your operation. Combine this with the flexibility to change configurations within the same crusher ~ standard, semi-autogenous or fully-autogenous ~ you have an impact crusher that maximizes your return on investment.

Give us a call!



### Accessibility

Top inspection doors provide unobstructed views of the entire crushing chamber. Our optional Hydra-Arm system makes maintenance safe and efficient. A single control effortlessly lifts the crusher lid providing access to the entire crushing chamber.



### Versatility

The rotor and shoe tables are interchangeable within the same crushing housing allowing for configuration versatility ~ standard, semi-autogenous or fully-autogenous ~



### Profitability

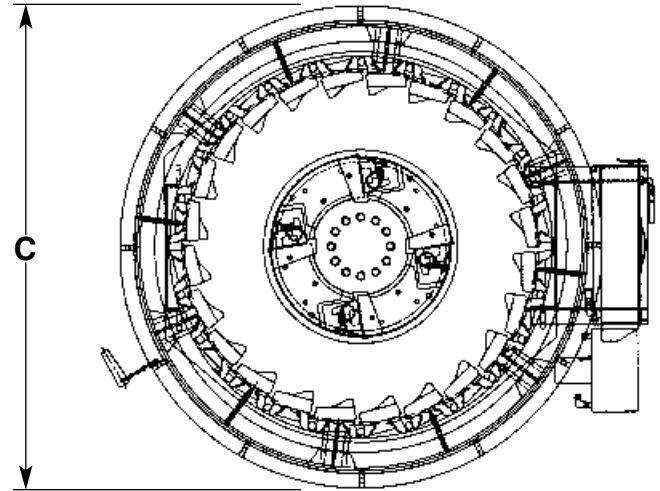
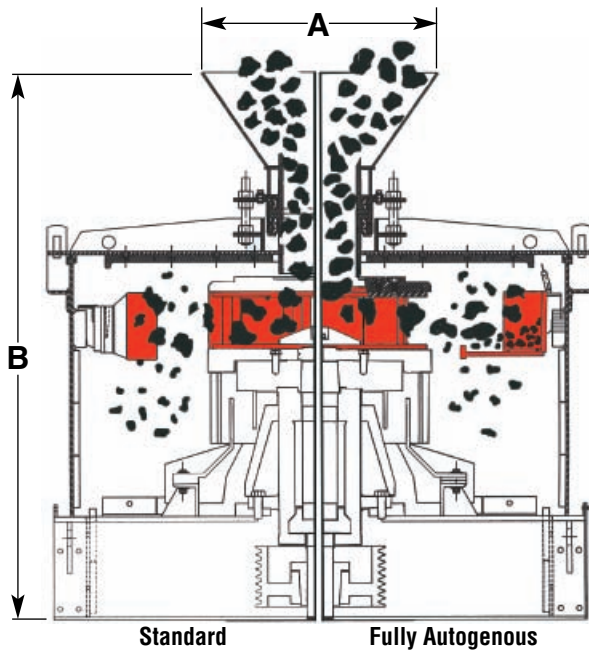
Our accelerator and hybrid rock shelf designs deliver more spec product in a single pass while utilizing less horsepower per ton than other fully-autogenous designs found on the market today.



### Adjustability

The impact area is vertically adjustable to maximize utilization of the wear component thus reducing your overall wear costs. Our feed tubes are reversible, replaceable and externally adjustable to fit your every need.

# VERTICAL IMPACT



## APPLICATION

### PIONEER VERTICAL SHAFT IMPACT CRUSHER Specifications and Production Characteristics

Model	Maximum Feed Size (1)		Minimum Recommended Closed Circuit	Feed Tube Diameter	Capacity Effective Crushing Range (2)		Standard Impeller Table Speed Range
	Inch	MM	Mesh	Inch	TPH	MTPH	RPM
1500 (H)	2	50	#16	8½	75-125	67-112	720-2000
1500 (A)	2	50	#4	8½	75-150	67-135	720-2000
2500 (H)	3	75	#16	11¾	150-250	135-223	700-1400
2500 (A)	2	50	#4	11¾	150-300	135-267	700-1400
82	3	75	#16	14.0	250-400	227-356	800-1200
4500 (H)	3	75	4M	16.0	300-450	267-401	800-1200
4500 (H)	5	125	¾"	16.0	300-450	267-401	800-1200
4500 (A)	2½	63	#4	16.0	300-500	367-454	800-1200
120	6	150	¾"	18.0	300-500	267-445	800-1080

**NOTE:** (H) in the model number denotes hardparts configuration also referred to as "standard configuration."

(A) in the model number denotes autogenous configuration. The specification and production rates shown apply to semi and fully autogenous.

(1) Max feed size restriction can vary with regards to material density, crushability, elongation, and impeller table speed or configuration.

(2) Feed size and throughput tonnage based on material weighing 100 lbs. per cubic foot.

## SPECIFICATIONS

### DIMENSIONS

MODEL	1500	2500	82	4500	120
Dim. (in.)	42"	36"	54"	54"	48"
A	1067mm	914mm	1372mm	1372mm	1219mm
B	76"	84"	100"	103"	105"
	1930mm	2134mm	2540mm	2616mm	2667mm
C	72"	82"	90"	90"	90"
	1829mm	2083mm	2286mm	2286mm	2286mm

### GENERAL

MODEL	Weight (Lbs.)	Explosion Chamber Cu. In.	HP Elec.
1500	13,200 (H) 13,700 (A)	4,635	75-150
2500	18,000 (H) 19,000 (A)	10,120	150-300
82	24,000	10,940	400-500
4500	29,600 (H) 29,100 (A)	17,360	400-500
120	32,100	26,020	400-600

(H) Standard  
(A) Autogenous

**NOTE:** Specifications subject to change without notice.

NOTE: SPECIFICATIONS ARE SUBJECT TO CHANGE WITHOUT NOTICE

KPI/JCI 3.5 PG 5/06

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