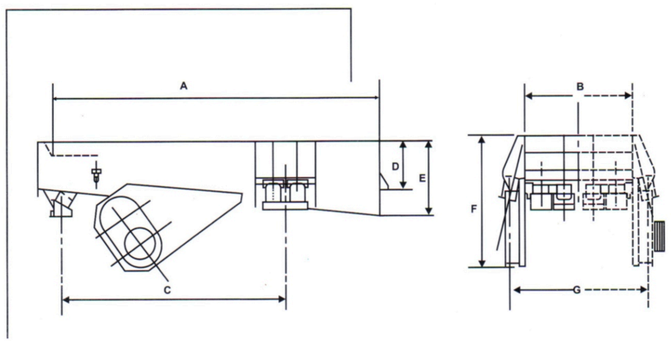
PERFECTION IN SIZE REDUCTION TECHNOLOGY
ECOMAN

VIBRATING GRIZZLY FEEDER

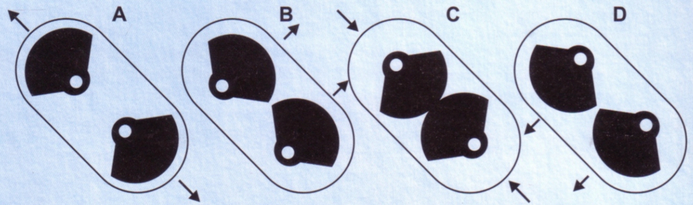


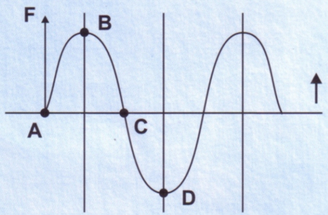
MODE	A	B	C	D	E	F	G
VGF 800	2800	800	1950	535	730	1290	1180
VGF 900	3000	900	2200	560	780	1350	1300
VGF 1000	3300	1100	2400	590	800	1400	1450
VGF 1200	3600	1200	2510	590	875	1460	1620
VGF 1400	4200	1400	2935	675	1000	1640	1800
VGF 1500	4400	1500	3100	700	1020	1720	2100
VGF 1800	4600	1800	3180	790	1190	1880	2275
VGF 2000	5600	2000	3500	900	1200	2000	2400
VGF 2500	6600	2500	4100	1100	1500	2200	2600

OPERATION

The feeder vibrating motion is produced by two contra-rotating eccentric shafts geared together and yielding a sinusoidal straight-ling force.

This force has an inclined direction in comparison with the horizontal deck of the feeder, giving the lifting and conveying actions of the material as shown by the diagram.





RUNNING OF CONTRA-ROTATING ECCENTRIC SHAFTS

A. THE FORCES IN OPPOSITE DIRECTION ARE NEUTRALISED.

B. AFTER A 90 DEG. ROTATION THE FORCES HAVE THE SAME DIRECTION AND ARE ADDED TOGETHER.

C. THE FORCES ARE AGAIN IN THE OPPOSITE DIRECTION BY THE FURTHER ROTATION OF 90 DEG.

D. TOTAL FORCE RESULTING IN THE OPPOSITE DIRECTION TO POSITION "B".

Both the shafts are geared together and actuated by a single motor. The vibrating unit yields uniform vibrations on each point of conveying plane being not subject to synchronization troubles.

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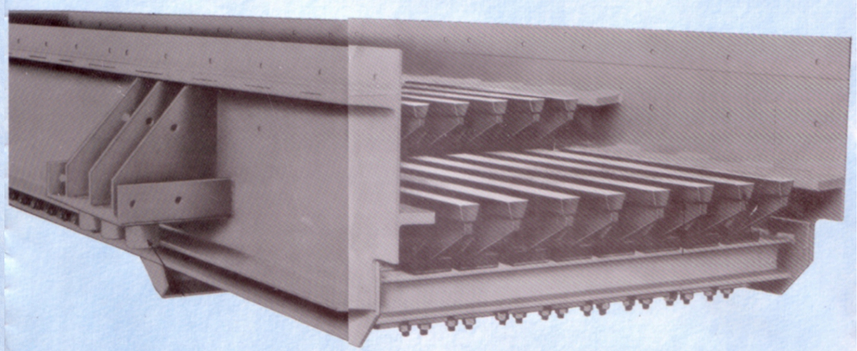
PERFECTION IN SIZE REDUCTION TECHNOLOGY
ECOMAN

SHREE CREATION # 277

HORIZONTAL VIBRATING GRIZZLY FEEDER

(EXTRA HEAVY DUTY)



PERFECTION IN SIZE REDUCTION TECHNOLOGY
ECOMAN

MFR. OF : CRUSHING & SCREENING PLANTS

HOW TO SELECT THE RIGHT FEEDER

BASIC DATA YOU WILL NEED : Nature of material being fed, its weight per cubic foot (kg/m.cu) and angle of repose. An approximate breakdown of material sizes. The greatest dimension of the largest piece. Required feeder conveying distance. Desired feeder capacity.

STEP 1 : Using the estimated percentage of large size (see * below) material, select the proper feeder width factor from Table A. Multiply this factor by the greatest dimension of the largest piece of material to determine **minimum feeder width.** Table A also shows throat opening factors when a four-sided hopper is utilized. Select the proper factor and multiply it by the same greatest dimension to find **minimum hopper throat opening.**

STEP 2 : Refer to Table C and identify the various combinations of feeder widths and slopes available for the desired capacity. Disregard any that are smaller in width than the minimum feeder width calculated in Step 1. It may become necessary to increase the minimum feeder width to obtain desired capacity. If so, disregard minimum width from Step 1 and substitute with the revised **minimum feeder width** for the desired capacity as shown in Table C.

STEP 3 : Now consider feeder length. Usually the size and positioning of companion equipment such as crushers, conveyors, aprons, hoppers, chutes, etc. suggest the given to **minimum feeder pan length.** The **pan** can also be no shorter than that which is needed to retain the material at its angle of repose on the pan after the feeder has been shut down.Determine minimum pan length by referring to Sketch B. Make your own scaled diagram to show slope of feeder and the angle of repose of the material on the pan at rest. Allow for the proper hopper throat opening (from Step 1) when using a four-sided hopper. Add 12" (30 cm) to the pan length as a safety factor to prevent the material from continuing to flow freely. Then add the length of any required grizzly sections to the minimum pan length to determine the **minimum feeder length.**

STEP 4 : Again evaluate width, slopes and capacities shown in Table C. Consider feeder length and headroom requirements. Match these with location, elevations and critical dimensions of companion equipment. Remember to allow for future capacity increase demands. Now select the width/slope combination that meets desired capacity and which is best suited to your particular application and installation peculiarities. You may want to go narrower and steeper to match up with a crusher opening; perhaps wider to accept feed from an existing apron conveyor. Or, you may have to go wider with less slope to accommodate elevation limitations. You are likely to discover that although more than one size feeder will satisfy your capacity requirements, one particular width/slope/length combination best serves your specific needs.

PERFECTION IN SIZE REDUCTION TECHNOLOGY ECOMAN

TABLE A - SECTION FACTORS

Percent Large Size*	Feeder with Factor	Hopper throat Factor
1-10%	1.3	1.5
10-40%	1.5	2.0
40-60%	2.0	2.5
60-90%	2.5	3.0
90-100%	3.0	3.5

* Those pieces which range in size from 75-100% of the largest piece. If the largest piece is 36" (91cm) then "largesize" are all pieces 27" (69 cm) and larger.

Primary grizzly feeders, VGF Series
Straight-line motion.
For controlled feeding of primary crushers after separation of quarry fines
Primary vibrating feeders VGC Series combine scalping of run-of-quarry and feeding oversize retained by grizzly bars to crusher. Fines passing the steel bars spacing like the crusher jaw setting, can be directly conveyed to screening.

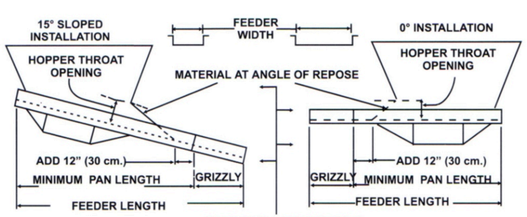
Advantages :
Crusher operates at max. capacity with low wearing since the crushing chamber is not filled with undersize material.

Grizzly fines, discharged by crushed prod. belt conveyor, protect the rubber belt from attrition and shearing due to product discharge from primary crusher.

TABLE C - CAPACITIES Based on material weighing 100 lb./ft.cu (1600 kg/m.cu.), 12" (30 cm) material bed depth and 1/2" (13 mm) stroke @ 800 RPM.

Slope of Pan	FEEDER WIDTH IN MM/TONS PER HOUSE								
	800	900	1100	1200	1400	1500	1800	2000	2500
0 DEG	275	350	400	475	525	600	725	850	1000
5 DEG	375	450	525	600	675	750	900	1050	1160
10 DEG	450	550	650	725	825	900	1075	1250	1440
15 DEG	550	650	750	850	975	1075	1300	1500	1850

SKETCH B - MINIMUM PAN AND FEEDER LENGTH



PERFECTION IN SIZE REDUCTION TECHNOLOGY ECOMAN

SIZE	VGF 800	VGF 900	VGF 1100	VGF 1200	VGF 1400	VGF 1500	VGF 1800	VGF 2000	VGF 2500
Size of feed deck width	800	900	1100	1200	1400	1500	1800	2000	2500
Grizzly length Total length	1600 2800	1700 3000	1800 3300	2000 3600	2400 4200	2500 4400	2600 4600	3000 5600	3200 6600
Grizzly bars-openings	50/ 150	50/ 180	50/ 200	50/ 200	50/ 250	50/ 250	50/ 300	50/ 350	50/ 400
Max. feed size mm	500	600	700	800	1000	1100	1200	1400	1600
Max. capacity TPH	250	350	400	480	640	750	1040	1200	1400
Horse power	15	20	25	30	30	40	50	75	100
Wt. Kgs.	3500	4200	5200	6500	8800	9800	12200	14600	16200

FEATURES

- Massive welded frame to withstand extreme shock loads.
- Conveying deck with pan and grizzly combination, back and side renewable liners.
- Non-plugging and stepped grizzly, separately renewable, for material tilting and easy fines passing.
- Vibrating unit consisting of two contra-rotating eccentric shafts, geared together in oil-bath. Special roller bearings in oil-bath and protected by grease labyrinths.
- Setting of amplitude is effected at still machine by varying unbalance.
- Actuation is by 4-pole motor and V-belts drive.
- Special steel springs arranged for the installation on concrete or steel supporting structure.
- Welded plate supporting structure (supplied upon request), cross-breams and steel-sections preset for feed and fines discharge hopper application.
- It is possible to insert a device for continuous output setting.