## Gold Crush K.V. Metal Works

Sand Making Plant



MAKE DIFFERENCES TO GENERATION INFRASTRUCTURE





# K.V. Metal Works

An ISO 9001-2008 & ISO 18001-2007 Certified Company, Certificate No. - 160127601



#### Gold Crush K.V. Metal Works





### GOLD CRUSH (GC -VSI) Vertical Shaft Impactor

is one of the most versatile crushers available on the market today. Our VSI is technologically advanced and has features to maximize first-pass yields and lower operating costs. It is the most efficient machine for making plaster sand as well as concrete sand. GC-VSI can be used for shaping the aggregate to meet the specification of aggregate as well as for making crushed sand for superpave asphalt aggregates, road base, gravel, sand and cement. It may also be used for size reduction in industries for corundum, corundite, ferro-silicon, glass, refractory, silicon carbide, tungsten carbide and zeolite. Mining applications include size reduction of bauxite, burnt magnesite, iron ore, non-ferrous metal ore, perlite and trona sulfate. VSIs are excellent for everything from abrasive materials to waste and recycling applications.



### GOLD CRUSH (GC-VSI) Vertical Shaft Impactor



## **Working Principle**

GC-VSI Vertical Shaft Impactor (VSI) crusher uses a unique approach for size reduction involving a high speed rotor with wear resistant tips and a crushing chamber designed to 'throw' the rock against. The VSI crusher utilizes velocity rather than pressure as the predominant force to break rock. The product resulting from VSI Crushing is of consistent cubical shape required by modern superpave highway asphalt applications. Using this method also allows materials with much higher abrasiveness to be crushed than is possible with an HSI and most other crushing methods.

Gold crush (GC-VSI) crushers utilize a high speed spinning rotor at the center of the crushing chamber and an outer impact surface of either abrasive resistant metal anvils or crushed rock. The models utilizing cast metal surface (anvil) is referred to as a "Shoe and Anvil VSI". And the models utilizing crushed rock on the outer walls of the crusher for new rock to be crushed against is referred to as "rock on rock VSI". We offer both designs depending upon the nature of stone and its usage. GC-VSI Crushers can be offered in static plant set-up or in mobile tracked equipment.



### GOLD CRUSH (GC-VSI) Vertical Shaft Impactor

## **Advantages of GC-VSI crusher**





The GC-VSI's high cubical fracture percentage maximizes first-pass product yield and produces tighter particle size distribution. It has a high-throughput capacity ideal for beneficiation (elimination of soft material). Our Computer simulated configured VSI accepts highly abrasive materials with very slow wear rate, It has simple operation and maintenance. You can quickly change product size by changing rotor speed or cascade ratio. Our machine has reversible wear parts to reduce downtime. The GC-VSI typically has low operating costs even in high-moisture applications because of reduced energy costs and low wear cost per ton.

GC-VSI is typically used after a primary or secondary crusher. This makes a VSI ideal for making sand and for making cubicle coarse and medium aggregates for concrete/asphalt production.

Our machines accept feeds from 6-40 mm depending on the model selected. Computational Fluid Dynamics (CFD) mathematical modeling is utilized to simulate the flow and collision forces to design the shape of the tips and anvil for lowest wear cost, consistent final product, and higher energy efficiency.

The rotor speed (meters per second) controls final particle size. Speeding up the rotor will produce more fines, slowing it down will produce fewer fines. A VFD for motor can be offered to vary the speed as an additional feature.

Heavy duty vibration isolators provided between the body and support frame ensure long life for the equipment and lowers the chances of unbalancing of rotor meaning longer service.

The inbuilt chassis, supporting structure and ladder platform makes it a plug and play product. The user can start the machine in a matter of a few hours from the time of receiving it from our plant. The machine is fitted with drive at our plant under supervision of experts and the alignment achieved at plant enhances the smoothness in operation and long life for the belts as well as motor.



### GOLD CRUSH (GC-VSI) Vertical Shaft Impactor

## **Technical Specification**

Model No.		GC-VSI-50	GC-VSI-75	GC-VSI-100	GC-VSI-200	GC-VSI-300
Rotor Speed	(RPM)	1200-1600	1200-1600	1200-1600	1200-1600	1200-1600
Feeding Size	(MM)	~25	~30	~30	~35	~35
Power	(HP)	60	75-100	100-125	150-180	200-225
Nominal Throughput Capacity (TPH)		40-50	60-70	90-100	150	200-250





### **GOLD CRUSH (GC-VS) Vibratory Screens**

## Wire mesh fitted Vibrating screen

We manufacture reliable and high performance wire mesh fitted vibrating screen which offer 20% higher sieving compared to the plate type screens. The wire mesh is fixed on sides using crowning at the centre so that the wire mesh is always pulled from sides and the sieving is most efficient. Robust side casing and shaft with elegantly designed platform and chassis make it an engineering marvel.

Vibratory screen efficiency is key to the plant capacity and controls the particle size analysis by preventing the smaller size stones to recycle in the crushing machinery. The sieving is perfect and requires minimum maintenance. The equipment is designed for long life.

### **Technical Specification**

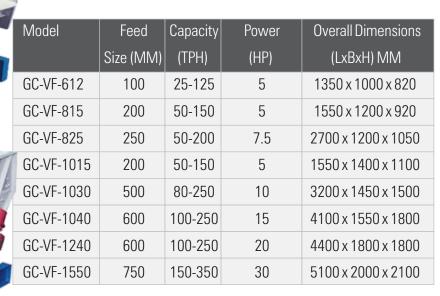
Model	Size	Deck	Opening	Capacity	Power
	(Feet)		Mesh (MM)	(TPH)	(HP)
GC-VS-84	8x4	2/3	4.75/3/1.85	10-50	7.5
GC-VS-104	10x4	2/3	4.75/3/1.85	15-75	10
GC-VS-124	12x4	2/3	4.75/3/1.85	20-90	10
GC-VS-125	12x5	2/3	4.75/3/1.85	25-100	10
GC-VS-145	14x5	2/3	4.75/3/1.85	50-150	15
GC-VS-165	16x5	2/3/4	4.75/3/1.85	50-200	15
GC-VS-185	18x5	2/3/4	4.75/3/1.85	100-250	20
GC-VS-205	20x5	2/3/4	4.75/3/1.85	100-300	25
GC-VS-206	20x6	2/3/4	4.75/3/1.85	100-300	30





#### GOLD CRUSH (GC-VF) Vibrating Feeders





## **Belt Conveyors**

We design, Engineer, manufacture and supply belt conveyors for complete projects for stone crushing as well as sand making. Made using standard section as well as pre- engineering sections, they are robust and meet the duty conditions of stone crushing as well as sand making plants. We have successfully executed projects using our conveyors to match the world class machinery for making sand as well as stone aggregate.

In house manufacturing of parts like frames, supports, idler, roller, return roller, head pulley and tail pulley ensure that we have complete control on quality, performance and delivery time to meet the stringent demands of our





## **K.V.** Metal Works

Manufacturers of VSI Stone Crushers, Rotary Screen, Vibrator, Jaw Crusher, Repairing and Job Work

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