



REMco

ROCK ENGINEERED MACHINERY CO. INC.

ST/AR VSI Crushers

www.remcovsi.com

2016 Edition

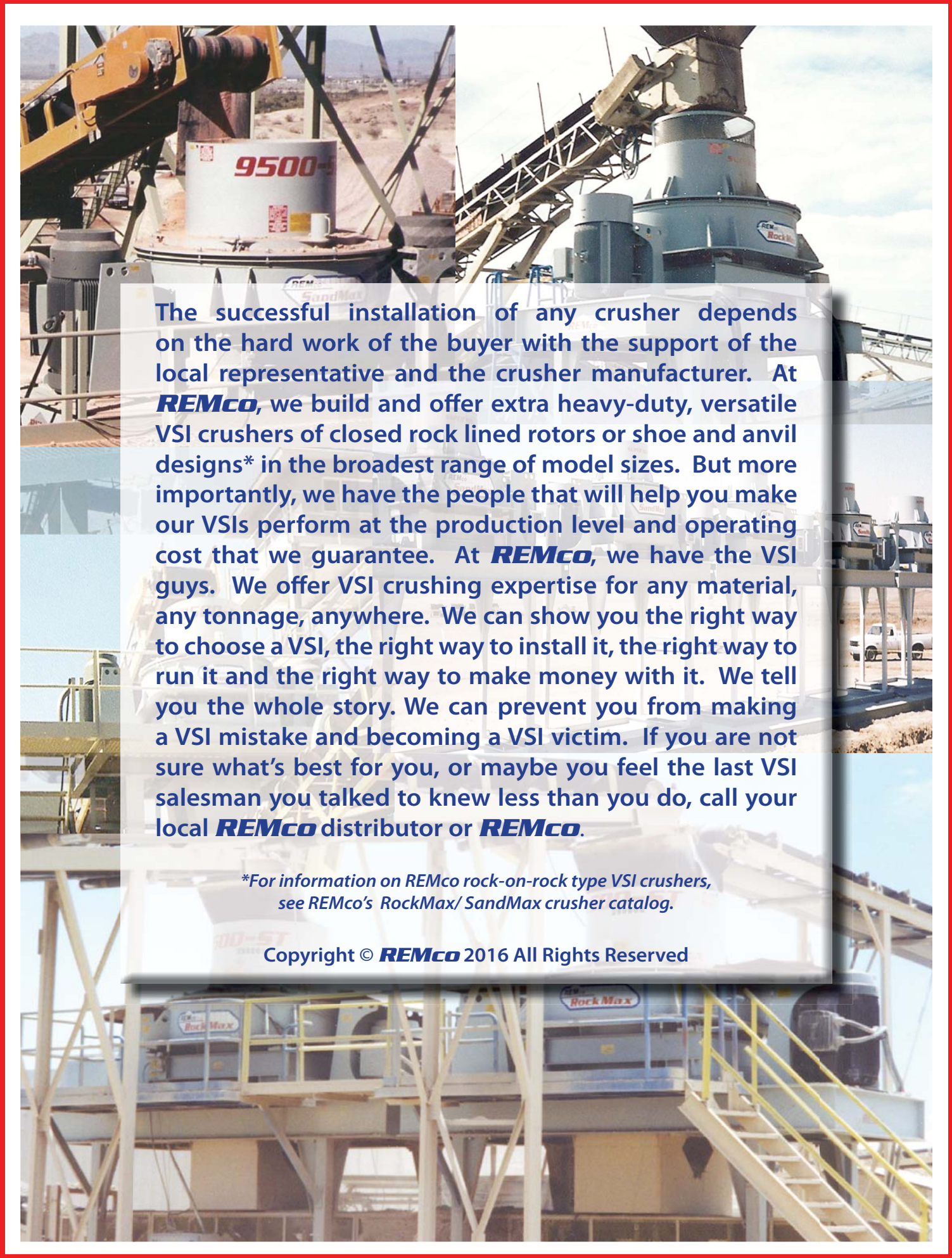


... Rock Engineered Machinery Company

California USA. It was founded by machinery and rock processing professionals in 1983, and it is now a leader in reduction technology and know-how. REMco manufactures the broadest line of fully autogenous rock-on-rock VSI crushers for the reduction of hard, abrasive rocks and ores. Our machines serve the needs of the construction materials, mining and industrial mineral producers. We also offer rock-on-anvil VSI machines for limestone and less aggressive materials. The products produced by our machines are cubical, well graded, sound, mid-range aggregates, specification sands and other fine sizes.

At **REMco**, we understand that size reduction equipment generates revenue for its owner, our customer. Our crushers are designed using top quality materials and the latest design techniques. We provide the best possible technical support in order to achieve customer satisfaction and attain the lowest crushing cost per net ton.

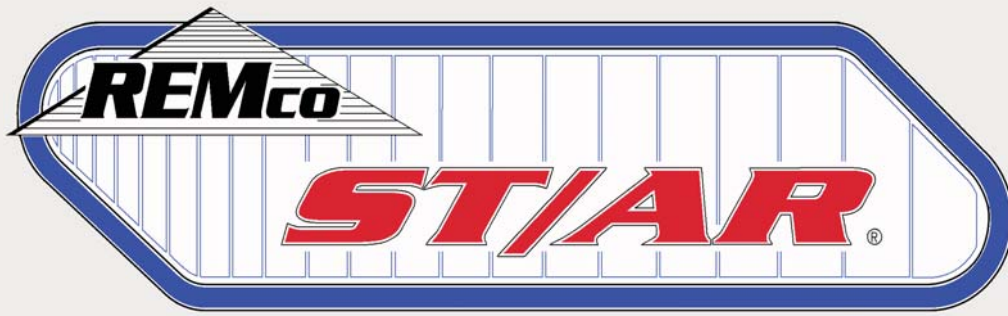
In this catalog we provide you with the information you need to determine what model machine is best suited for your crushing task. When you have selected what you feel is best from the information contained herein, please contact **REMco** for application guidance and to discuss what else you must consider to realize the best return from your crusher dollar investment.



The successful installation of any crusher depends on the hard work of the buyer with the support of the local representative and the crusher manufacturer. At **REMco**, we build and offer extra heavy-duty, versatile VSI crushers of closed rock lined rotors or shoe and anvil designs* in the broadest range of model sizes. But more importantly, we have the people that will help you make our VSIs perform at the production level and operating cost that we guarantee. At **REMco**, we have the VSI guys. We offer VSI crushing expertise for any material, any tonnage, anywhere. We can show you the right way to choose a VSI, the right way to install it, the right way to run it and the right way to make money with it. We tell you the whole story. We can prevent you from making a VSI mistake and becoming a VSI victim. If you are not sure what's best for you, or maybe you feel the last VSI salesman you talked to knew less than you do, call your local **REMco** distributor or **REMco**.

**For information on REMco rock-on-rock type VSI crushers, see REMco's RockMax/ SandMax crusher catalog.*

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Vertical Shaft Impact crushers that use an anvil type crushing chamber are well-proven for the quick and efficient reduction of limestone and other less abrasive stones and minerals. The **REMco ST/AR VSI** crushers are a variation of the **REMco SandMax** and **RockMax** series. These machines share many of the same heavy-duty designs and components; as well as the very successful bearing cartridge and main shaft design. **REMco** crushers are available with oil lubrication and as an optional automatic grease lubrication system.

REMco ST/AR VSI crushers use an innovative patented reversible anvil design which allows for maximum utilization of the anvil wear metal. This feature provides for a maximum crushing efficiency when the anvils are new, concentrating the wear on half of the anvil face. The anvils can then be easily turned, providing a complete new crushing face on the same anvil. This maintains maximum crushing efficiency for the wear life of the anvil. This also reduces scrap loss cost.

REMco ST/AR VSI crushers are fully convertible and can be easily converted from anvils to rock-on-rock chambers and rotors if the feed material dictates that such a change is appropriate. The **ST/AR** designation means these machines are fitted with a Swing Top / Anvil Ring design.



**Don't believe it?
Try us.**

**Remember...
With a REMco
VSI Crusher...
the rock never
wins!!!**

THE REMco APPLICATION PROCESS FOR ST/AR VSI



REMco ST/AR VSI crushers have a broad range of application to crush many types of rocks, ores, and minerals. The key to successful application is to consider the right size machine and plan for its use in an economical way. **ST/AR VSI**'s use a variety of anvil type chambers that can process coarse, medium, and fine feed sizes. These **REMco** units are recommended when processing less aggressive rocks and minerals.

By this, we mean materials which generally contain less of the abrasive mineral elements such as; alumina (Al_2O_3), silica (SiO_2) and iron (Fe). These elements and their inclusion in the rock grain structure determines how quickly the wear parts in a **ST/AR VSI** will be consumed. This is a main consideration in the application and use of a **ST/AR VSI** crushers.

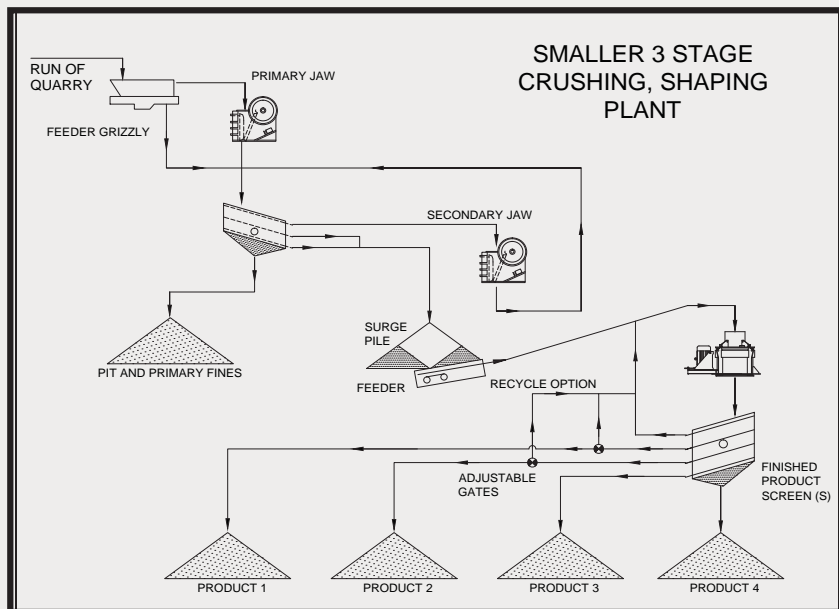
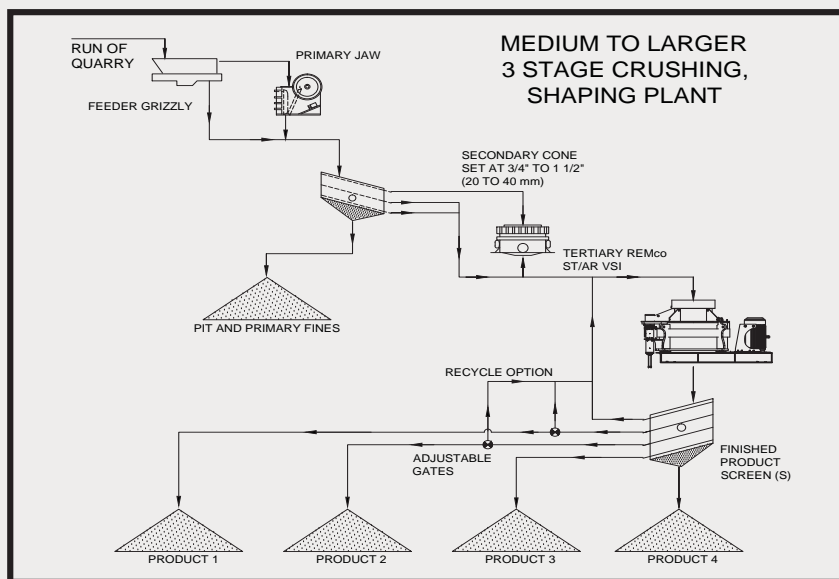
When these elements exceed a total of approximately 15% - 20% of the chemical analysis of a rock, ore or mineral, special care should be taken to make a cost analysis prior to selecting the VSI crusher.

REMco recommends prospective buyers to perform a thorough crushing test on their material which is the most effective way of projecting crusher performance and future wear parts cost. Due to their lower capital cost, better reduction capability, and high productivity, **REMco ST/AR VSI** will be a better total investment than a high priced cone crusher.

REMco ST/AR VSI crushers are very efficient crushers producing a very high percentage of high quality cubically shape finished product in open circuit, single pass operations. **ST/AR VSI** crushers will readily outperform cone crushers in limestone, basalt, and other rocks. When crushing milder, less aggressive type rocks, a greater single pass reduction can be achieved by using an anvil type crushing chamber. **REMco ST/AR** crushers produce a greater percent passing the sieve sizes from 1-1/2" to 3/16" (40 mm to 5 mm) in a single pass.

As the anvil chambers wear, there will be a gradual coarsening of the crusher discharge. In more abrasive materials, this may happen in days or weeks and may become noticeable by the increase in circulating load. In milder, less aggressive rock, this condition may take months or years to develop.

Note: It is recommended that all circuits using a **REMco VSI** be arranged to include protection from uncrushables by using magnets or metal detectors. Ample size vibrating screens are necessary for optimum crusher performance. Using a surge preceding the crusher and a variable rate feeder will enhance performance, maximize production and provide the lowest wear cost per ton.



**Do it the right way,
do it the REMco way!**

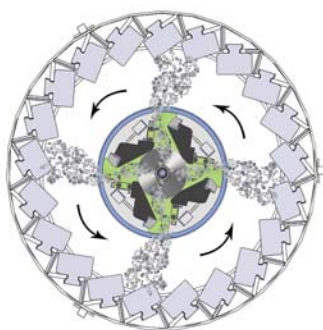
The REMco Hard Impact Crushing Process

REMco ST/AR impact crushers are designed for crushing a wide range of rocks, ores and minerals into fine cubical products. **REMco** crushers with their open shoe tables or closed rotors have expanded the application range and crushing performance. Due to their various sizes and configurations, **REMco ST/AR** impact crushers achieve a wide range of application versatility.

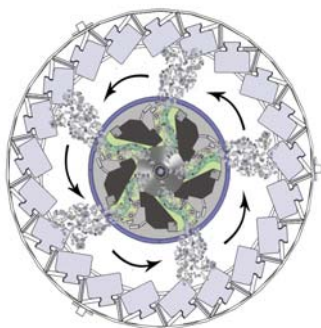
ROCK ROTOR TO ANVIL

To reduce the wear cost of an anvil chamber machine, **REMco** offers a design which replaces the shoe table with a closed rock-lined rotor. This feature allows application of anvil-type chambers for the crushing of rocks having a medium abrasion characteristics. When a closed rotor is used with an anvil chamber, the total wear cost of parts may be reduced by as much as two-thirds depending on desired reduction, feed size and crusher series.

Typical
4-port
Rotor



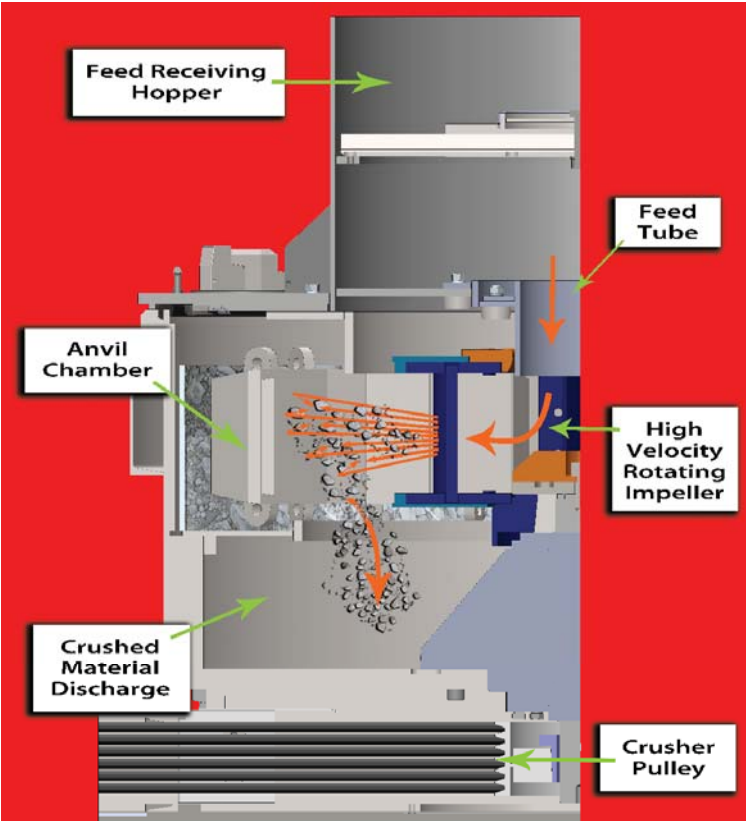
Typical
5-port
Rotor



SHOE TABLE TO ANVIL

The rock initially impacts a large heavy chrome iron anvil positioned at a variable distance from the shoe table. The gap between the rotating table and the anvil is determined by the application of the crusher to a specific rock type and desired product. The anvil thickness and angle is also varied depending on wear characteristics of the material as the anvil is consumed. The shoes and other wear castings on the table receive the greatest wear and are typically replaced more frequently than the anvils.

Another feature on **REMco ST/AR** crushers is the multi-position anvil ring which allows the raising and lowering of the anvil relative to the rock stream from the shoe table, to maximize utilization of the total-wearing iron parts. In combination with the reversible design of **REMco ST/AR** anvils, this can provide multi positioning of the same anvil set. This minimizes scrap loss and reduces the wear cost per ton.



Controlling the top size of the feed is important in order to achieve optimum performance from **REMco ST/AR VSI** crushers. Generally, the larger the crusher the bigger the feed capability. When choosing a crusher model/series, its capacity can be influenced by the largest particle in the intended feed. For accurate selection of the open shoe table or closed rotor configuration, as well as the chamber arrangement, do not exceed the feed sizes shown in the tables below. Maximum feed size is determined by the longest one-way dimension.

ST/AR MAXIMUM FEED SIZE CHART WITH SHOE TABLE		
MOTOR ARRANGEMENT	TOTAL DRIVE POWER	RECOMMENDED MAX. FEED SIZE
Single Drive	30 - 125	2" - 50 mm
Single Drive	200 - 250	2" - 50 mm
Single Drive	300 - 500	4" - 100 mm
Dual Drive	500 / 600	4" - 100 mm
Dual Drive	700 / 800	6" - 150 mm
Dual Drive	1200 / 1500	6" - 150 mm

ST/AR MAXIMUM FEED SIZE CHART WITH ROCK-ON-ROCK ROTOR		
MOTOR ARRANGEMENT	TOTAL DRIVE POWER	RECOMMENDED MAX. FEED SIZE
Single Drive	30 - 125	2" - 50 mm
Single Drive	200 - 250	2" - 50 mm
Single Drive	300 - 500	4" - 100 mm
Dual Drive	500 / 600	4" - 100 mm
Dual Drive	700 / 800	4" - 100 mm
Dual Drive	1200 / 1500	4" - 100 mm

REMco ST/AR CRUSHERS

CAPACITY TABLE IN TONS PER HOUR (2,000 LBS.) AS MEASURED AT **POINT A** OF BASIC VSI CIRCUIT
OPEN CIRCUIT, SINGLE PASS, TONS THROUGH THE CRUSHER, 100% SINGLE FLOW THROUGH ROTOR, NO BYPASS

REMco VSI COMPLETE MODEL RANGE CAPACITY TABLE						
TOTAL DRIVE POWER	ALL OF THESE MODELS ARE OF SINGLE DRIVE (SD) ONE MOTOR DESIGN				THESE MODELS ARE OF DUAL DRIVE (DD), TWO MOTOR DESIGN	
	SERIES 310 SD	SERIES 1025 SD	SERIES 1530 SD	SERIES 4060 SD	SERIES 5080 DD	SERIES 9150 DD
30 hp	15 - 20					
40 hp	30 - 35					
50 hp	35 - 40					
60 hp	40 - 45					
75 hp	60 - 70					
100 hp	80 - 90	80 - 90				
125 hp	100 - 110	100 - 110				
150 hp		130 - 140	130 - 140			
200 hp		160 - 180	160 - 180			
250 hp		220 - 240	220 - 240			
300 hp			260 - 280			
350 hp			300 - 340	300 - 340		
400 hp				360 - 400		
500 hp				430 - 480	430 - 480	
600 hp				550 - 600	550 - 600	
700 hp					600 - 650	
800 hp					650 - 750	650 - 750
1000 hp						700 - 850
1200 hp						850 - 1000
1500 hp						1000 - 1500

Note 1: The capacities shown in this table are for crushing sound, competent stone having a crushed bulk density of 100 lbs. per cubic foot. Larger, angular feeds will reduce capacity; finer, cubical feeds will increase capacity. When crushing to produce improved shape, slower speeds may be utilized. This may increase the crusher feed rate and lower the reduction.

Note 2: Rock feed containing excessive amounts of water, clay, soil, dirt or other contaminant will cause reduced crusher performance.

Note 3: This catalog covers **REMco VSI** crushers that do not use any form of **cascade or by-flow** around the rotor. Those designs do not enhance crusher capacity or crushing performance. For information on dual flow designs, please contact **REMco**.

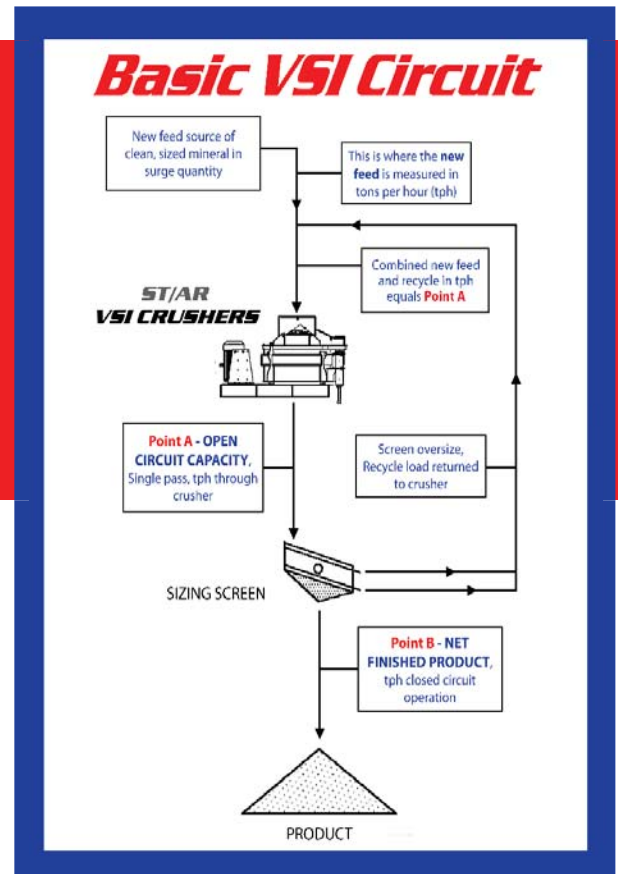
Note 4: The standard recommended drive power range as shown above can be increased or decreased for each model subject to application requirements. When altering the drive power range beyond that shown above, please contact **REMco** for approval and application guidance.

Selecting REMco VSI Impactor Crushing Capacities

To select the correct crusher for your application, please refer to the Basic VSI Circuit diagram. **REMco** impact crushers have two distinct capacities. These are measured at different points of the circuit. Understanding this circuit flow is key to proper crusher model and drive power selection.

Reduction Ratio

For REMco crushers, the reduction ratio is calculated as the relationship of the maximum feed size to the desired product size. For example, with a medium limestone feed not exceeding 6" and a product requirement of -1/4", the reduction is $6.0 \div 0.250 = 24:1$. With harder rocks, the max reduction ratio may be lower. When crushing to improve product shape, the reduction ratio is of lesser importance and this may be done with open circuit operation. When crushing for the production of sand, closed circuit operation is necessary and the reduction ratio should not exceed 12:1.

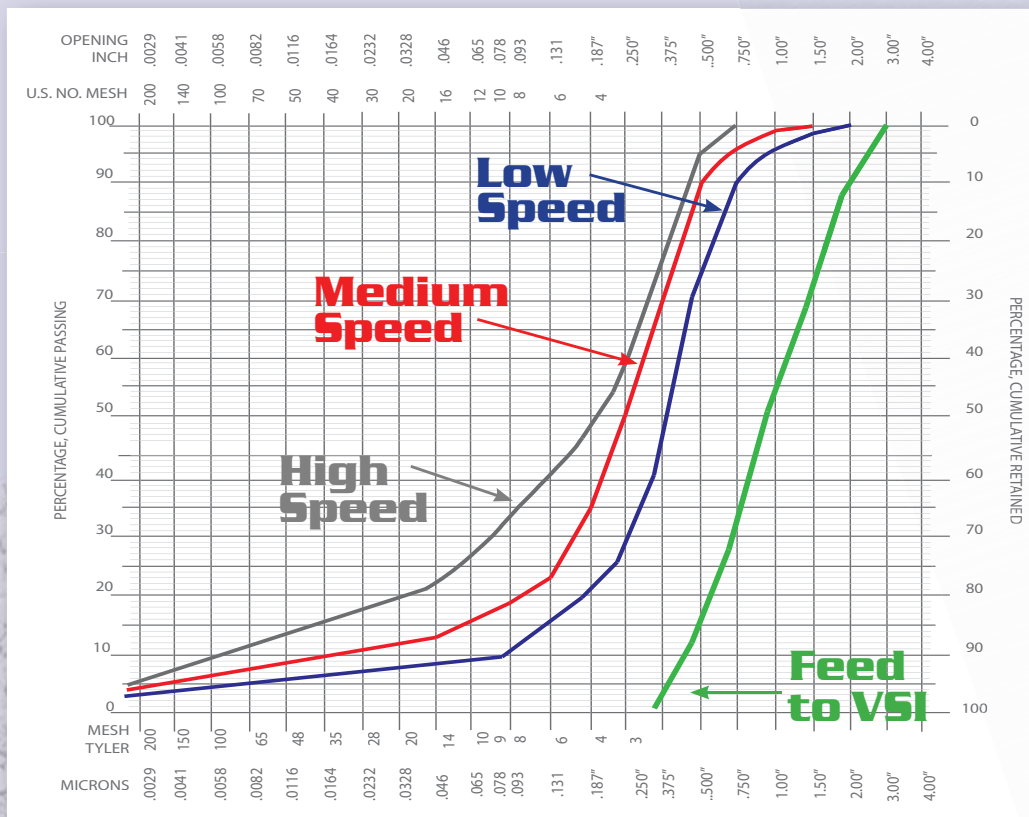


REMco VSI Crusher Discharge Grading Information



REMco ST/AR VSI crushers produce a greater percent passing in the sieve sizes from 1 1/2" to 3/16" (40 mm to 5 mm) in single pass. Feed sizes can be coarser and less well graded. Great consideration must be given to the abrasives content of the rock feed. Typically, **ST/AR** crushers are recommended for crushing limestone and materials with a low content of silica, alumina and iron. Various anvil designs are available.

The discharge grading of a **REMco** VSI crusher is dependent on many factors. When all of these are considered, and use the correct application process, a **REMco** VSI can be configured to any 3rd or 4th stage mineral reduction task.



For **REMco** crushers fitted with anvil chambers, there will be a gradual coarsening of the crusher discharge as the anvils wear. In abrasive materials, this will happen quickly, and it will be more noticeable by the increase in circulating load and reduced production of net product. In milder, less aggressive rock, this condition may take months or years to develop.

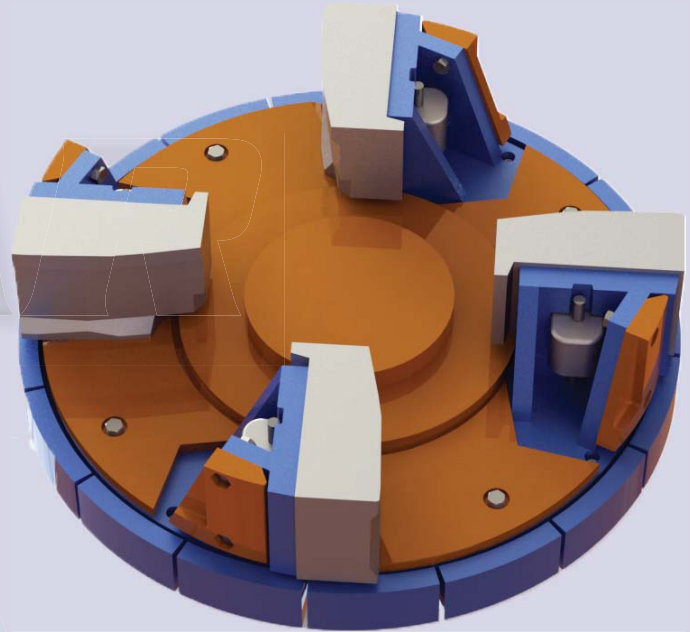
Due to their great versatility and model range, **REMco** crushers can be custom configured to the crushing task. The above graph illustrates the reduction that can be expected in the discharge grading when crushing a limestone feed.

REMco cautions prospective crusher users to not depend on typical catalog gradings when seriously considering their crusher selection. A formal crushing test is strongly recommended prior to final model and type of VSI selection.

To determine your specific material crushing characteristics and crusher discharge grading by running a formal crushing test, contact **REMco**.

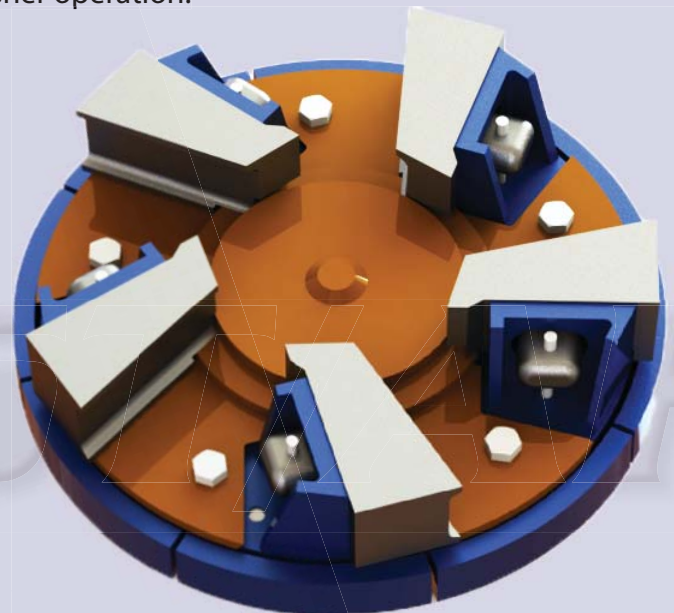
In addition to closed rotors, **REMco** offers rotating impellers with shoe type wear castings for use in **REMco ST/AR VSI** crushers. Typically, for coarser feeds of 2" to 6" these are of 4 shoe design.

The shoes are made of long wearing chrome iron and maybe of bi-metal or other wear materials. The impellers include quick replacement features, edge liners as well as center distributor plates, and other wear resistance components that protect the impeller body.



For finer feeds, generally below 2" in size, **REMco** offers impellers of 5 shoe design. These include all the features for quick change of shoes, center distributor plates, edge liners, etc. **REMco** shoe tables use a patented twin taper design for fastening the impellers to the crusher main shaft.

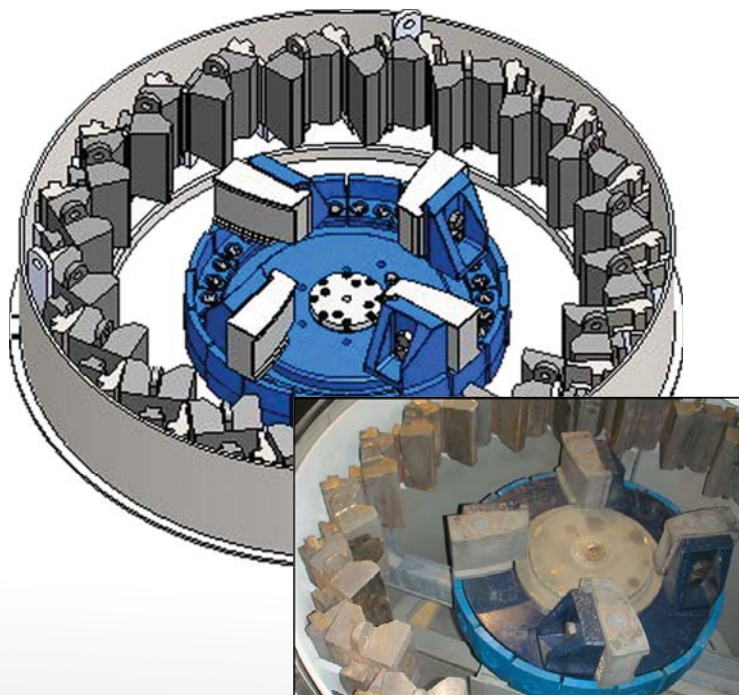
This is a unique cross key design which eliminates distress on the main shaft, and a secure locking of rotating parts. **REMco** balances all shoe type impellers to ensure smooth crusher operation.



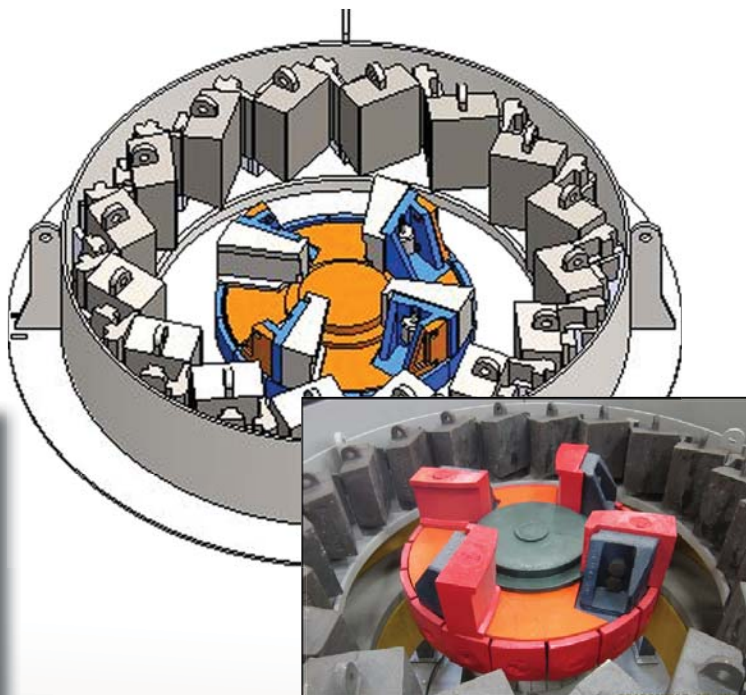
REMco ST/AR

ANVIL CHAMBER WITH OPEN SHOE TABLE

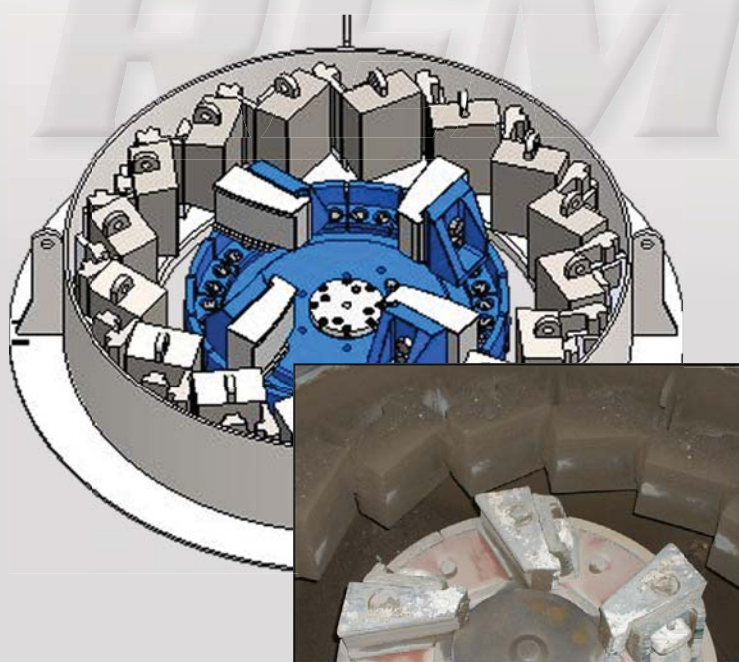
EXTRA COARSE FEED



COARSE FEED



MEDIUM FEED



FINE FEED

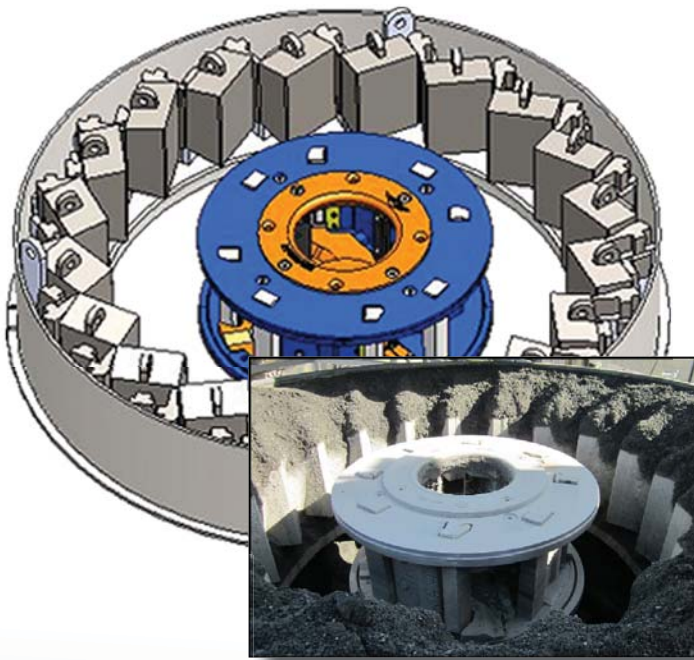


The use of open shoe tables with anvil chambers are best applied to non-aggressive materials in order to achieve extended wear life from the chrome iron components. **REMco** recommends crushing tests to determine wear life of these parts and to project an operating cost per ton.

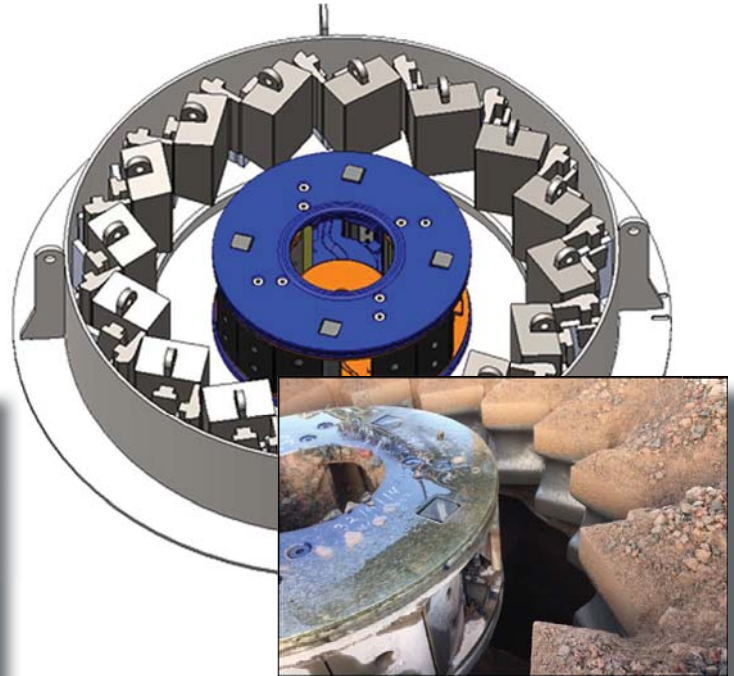
REMco ST/AR

ANVIL CHAMBER WITH ROCK LINED CLOSED ROTOR

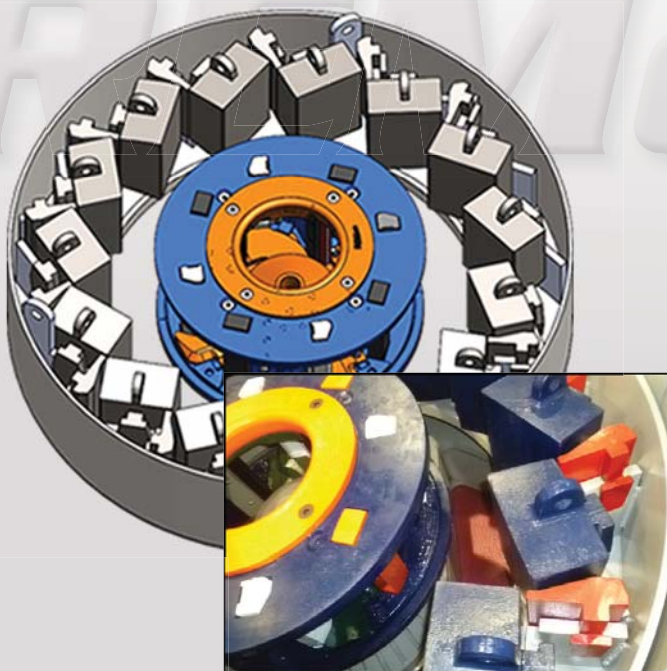
COARSE FEED



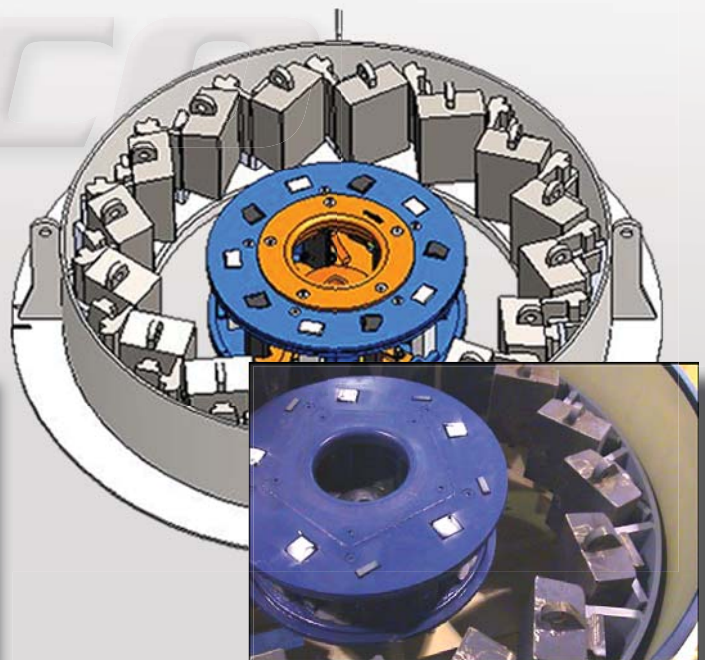
MEDIUM / FINE FEED



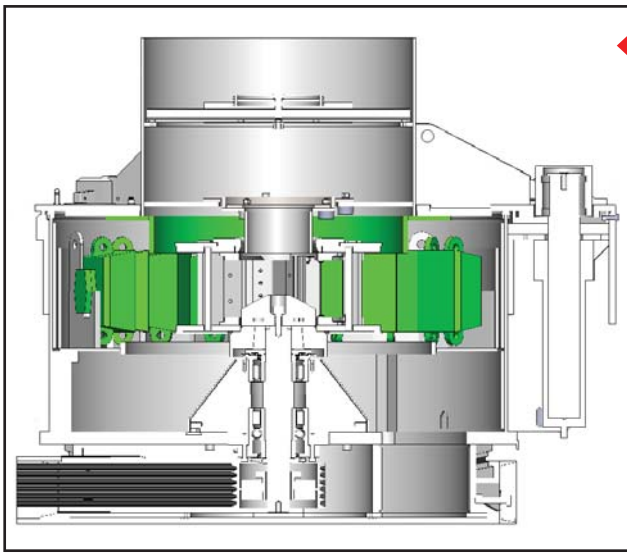
FINE / MEDIUM FEED



EXTRA FINE FEED



The use of semi-autogenous crushing arrangements in VSI crushers provides the best combinations of crushing efficiency with affordable operating costs. Chamber selection is best when based on total feed grading, material type, and desired product, as well as operating in closed or open circuit.



Typical internal cross section of
REMco ST/AR with
IronSide rotor
and anvil ring chamber

REMco crushers utilize advanced geometry designed rotors of multiple ports and multiple heights. These rotors are available in short, standard and tall designs to suit specific application requirements. This provides the greatest versatility and broadest application range for **REMco VSI** crushers.



Figure 1 – The **REMco IronSide** design uses drop-in type tungsten tips for ease of replacement and low cost operation. Multiple grades of tungsten are readily applied for maximum wear life depending on rock type. No bolts are used to hold the tungsten tips in place.

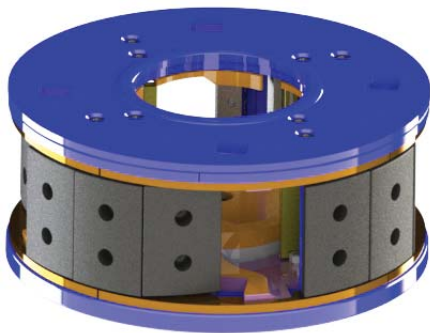


Figure 2 – By using relatively small, very hard chrome iron or steel wear castings, rotor weight is reduced, lowering power demand. This lowers energy cost and wear parts replacement cost. Rotor wear plates are bolted in place to maintain internal balance and prevent shifting during operation.

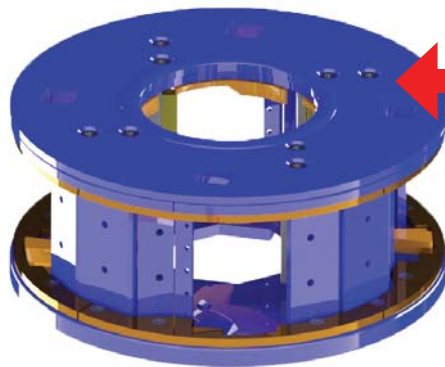
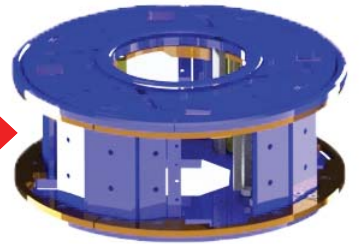
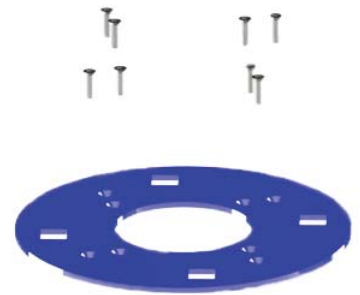
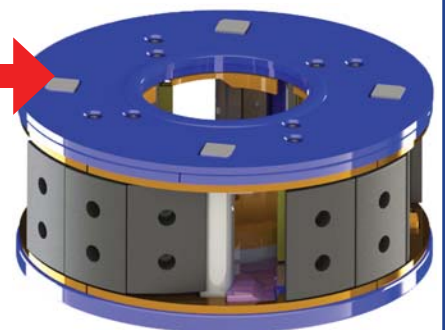


Figure 3 – **REMco** rotors do not require extensive repair welding of the rotor body. The rotor is protected by one-piece hardened AR steel wear disks, top and bottom. These are smooth, reducing air drag and are easy to replace after providing long wear life.

Figure 4 – The complete assembly of **REMco IronSide** rotors is designed for maximum tonnage throughput, lower power demand, ease of balance and wear resistances from material bounce back from the anvil face. This extends the service life in all materials reducing crushing cost.





VSI CRUSHER MANAGEMENT SYSTEM

SmartBox ...

Systems Monitoring And Recording Technology ...

The future is here. Improved operating control for maximum production at the highest quality.

The **REMco VSI SmartBox** crusher HMI controller provides consistent real time information about the machine's operating performance. **SmartBox** monitors and records all critical elements including:

- Monitors and displays real time temperature of all bearings
- Records oil tank temperature
- Drive motor AMP / KW draw
- Monitors all crusher vibration levels
- Records no loads / full load RPM
- Run down time feature
- All safety switches functions
- Lube system operation
- All system alarm notification signals
- Historical data logging, 365 days
- Custom designed historical printout
- Emergency stop function
- On screen alarm page trouble shooting guide
- Integrated system operator's manual
- Factory recommended settings for the system
- Provides scheduled maintenance alerts
- Records all maintenance
- USB flash-drive accessibility
- Monitors rotor wear parts

Optional System Features:

- Temperature sensing of all motor phases
- Temperature sensing of all drive motor bearings
- Crushing chamber temperature sensing

Optional System Integration:

- Can be integrated to an existing plant control system

Optional Monitoring Features:

- Real time alarm notification sent by text / email*
- Smartphone APP or iPad viewer*
- **REMco** Diagnostic services*

Optional Multiple Crusher Monitoring:

- 15" HMI touch screen
- Multiple crusher monitor in central location

The operating data is gathered and processed through the HMI that is supplied with the system, providing real-time readouts of all operating limits.



SmartBox ... The ultimate crushing machine management system.

SmartBox programming custom to each installation. This includes monitoring of all wear parts for protection against sudden wear parts failure.

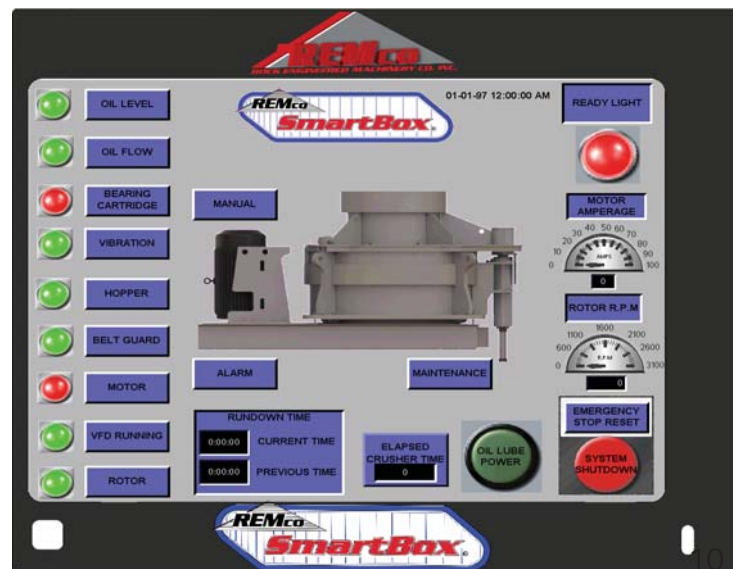
SmartBox ... the latest technology in crushing machine management for the modern producer. Improving product quality and production rate by managing operation and maintenance of the crusher. **SmartBox** ... diagnoses mechanical problems while they are still small, preventing interruption of crusher operation and unscheduled down time. **SmartBox** ... alerts operating personnel and provides management with continuous feedback on crusher utilization and performance.

SmartBox ... a quick return on your investment in crusher control.

US patent No. 7,489,254 ~ Foreign patents pending

Typical Computer Screen Capture of **SmartBox** System in Operation.

**Requires Internet connection*



STANDARD FEATURES

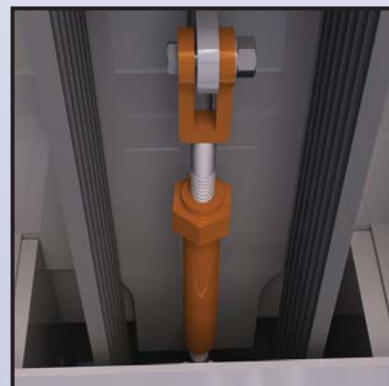
Some of the Many Plus Value Features on **REMco** Crushers



REMco offers six design series for its models with over 40 configurations to fit any crushing job.



Hydraulic lift assembly for quick and safe access when inspecting or servicing the crusher.



Dual acting heavy-duty ratchet jack for fast, clean and easy v-belt tensioning.



REMco crushers are pre-wired for interlock switches, vibration protection and safety compliance.



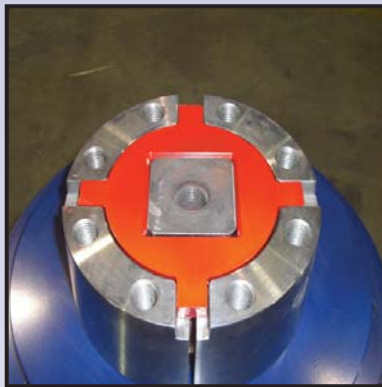
Standard support frame provides superior stability and ease of installation on any structure.



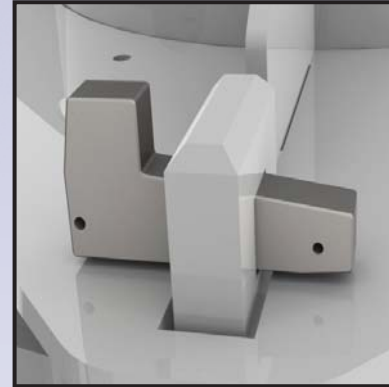
Four self-centering vibration isolator mounts for smooth operation, protection of drive motors and surrounding equipment.



Oil lubrication with tank, all safety sensors including heating and cooling of lube oil.



Patented cross-key design for locking rotor to mainshaft which eliminates damage or failure of the shaft from incorrect assembly.



Heavy-duty hammer driven steel wedges, secure the crusher top during operation and provide easy, quick access for service.

OPTIONAL ACCESSORIES

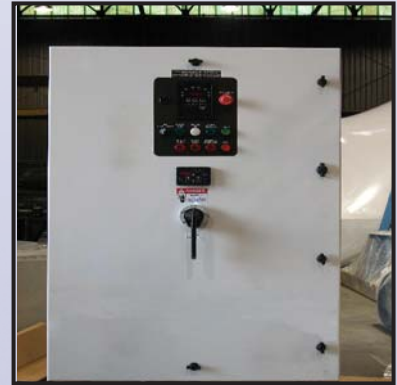
Some of the Many Plus Value Features on **REMco** Crushers



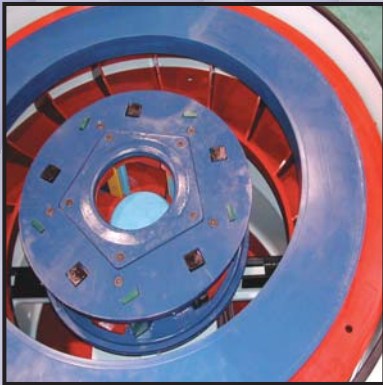
REMco offers installation kits that include support legs, skids, discharge hoppers and safety service platforms.



Electric or manual service hoists can be used on **REMco's** optional service crane.



Electric motor solid state starters are available for all size drive motors in any voltage and current characteristics.



REMco ST/AR VSIs can be field converted by removing anvil ring chambers and installing rock-on-rock inserts.



REMco offers a full range of drive motors with suitable electrical characteristics for heavy-duty crusher use.



For optimum product control, variable frequency drive (VFD) controllers are available for all motors sizes in single and dual drive types.



Basic or custom portable trailers are available for all **REMco** model sizes.



REMco also supplies complete portable plants for all models.



REMco's IronSide, clad rotor is designed for more aggressive applications where bolt-on replacement parts extended rotor service interval is required.

Typical Single Drive Arrangements for Stationary Installation

As an alternate to a complete wheel-mounted, mobile crushing plant, **REMco** installation kits are a money-saving way of putting the crusher to work.

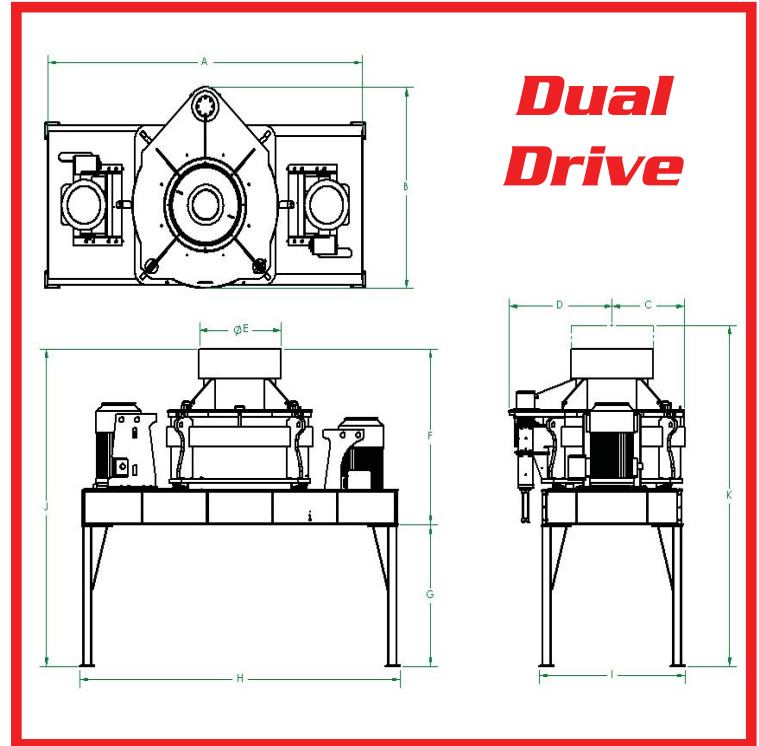
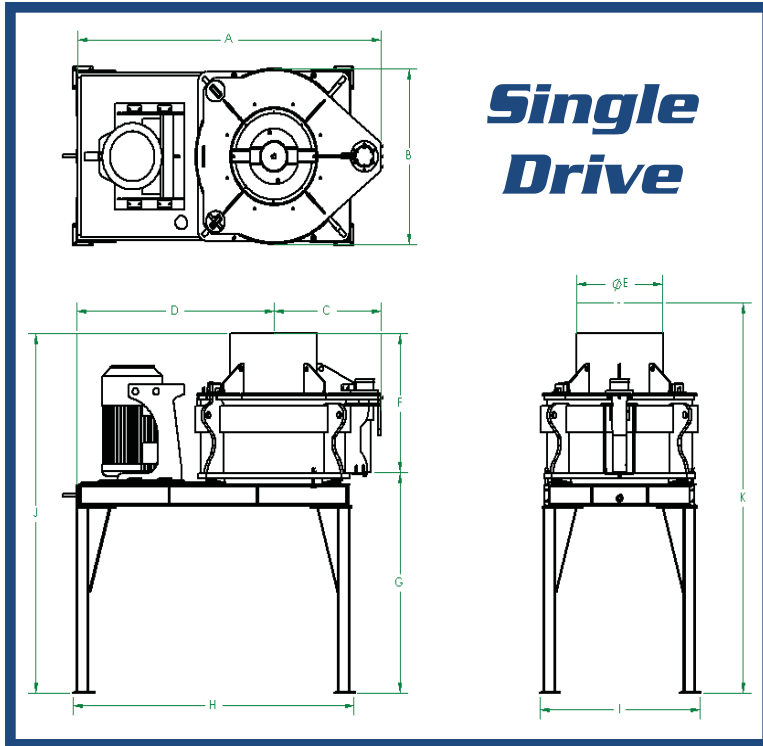


Proper installation of a new VSI into an existing or new crushing plant is **key** in achieving optimum performance and lowest cost operation. **REMco** offers economical installation kits which provide all the necessary supporting components to complete the installation of **all REMco VSI models and sizes**. These kits also allow for quick relocation of the crusher, if needed, as they mount on simple concrete pads or firm, level ground. Ready access for fast, safe inspection and maintenance of the crusher is also provided. **REMco** kits minimize dust emissions and can be fully wired for lubrication, motors and motor starters. They can be delivered to the plant site from the factory semi-assembled and be ready to operate in less than a day.

General Clearance and Installation Dimensions

REMco SINGLE DRIVE VSI Models

CRUSHER SERIES		A	B	C	D	E	F	G	H	I	J	K
310	INCHES	104	62	31	73	30	59	84	63	99	125	157
	METRIC	2638	1575	787	1851	762	1486	2137	1588	2518	3623	3974
1025	INCHES	114	66	44	82	30	56	97	120	72	153	167
	METRIC	2903	1684	1107	2071	768	1418	2461	3044	1829	3880	4235
1530	INCHES	152	75	54	99	43	68	98	137	75	165	179
	METRIC	3870	1907	1363	2505	1092	1720	2479	3467	1904	4200	4556
4060	INCHES	171	88	70	101	56	83	102	144	90	185	199
	METRIC	4352	2244	1777	2574	1409	2098	2600	3651	2285	4698	5054



REMco DUAL DRIVE VSI Models

CRUSHER SERIES		A	B	C	D	E	F	G	H	I	J	K
5080	INCHES	213	120	48	72	55	104	87	227	109	192	206
	METRIC	5410	3035	1206	1828	1384	2651	2219	5953	2755	4877	5226
9150	INCHES	270	270	75	58	58	88	96	192	142	214	228
	METRIC	6864	684	1905	1480	1480	2095	2438	4883	3594	5441	5798

The dimensions shown are approximate and subject to change. Do not use for construction. Request a certified installation drawing prior to designing the crusher support.

REMco reserves the right to change these dimensions without prior notice.

REMco Customer Services

When a new crushing circuit is being considered it is important to determine the crushing characteristics of the rock or mineral to be processed. Proper testing can establish the design parameters for new crushing plants to ensure that the desired product quantity and quality can be reliably produced by the equipment selected.

The only way to predict crushing costs with certainty is to establish the abrasion rate of the material to be crushed. From the softest limestone to the roughest silica, wear rates and the resulting crushing costs can be ascertained by a **REMco** crushing test.

REMco provides a crushing tests to prospective buyers of **REMco** crushers. These crushing test services are generally performed on a no-charge basis for standard tests or a fee basis for more extensive testing. **REMco** uses a Series 320 Model 200 VSI with 75 hp and VFD drive for these tests. This crusher can be arranged in a wide variety of configurations for test purposes. For accuracy in testing, it is essential that the right quantity of material be provided. For more information about these services, please visit www.remcohsi.com.



SPECIFICATIONS

SERIES MODEL	310	1025	1530	4060	5080	9150
DRIVE MOTOR ARRANGEMENT	Single	Single	Single	Single	Dual	Dual
HP RANGE	30 - 125	100 - 250	150 - 350	350 - 600	600 - 800	900 - 1,500
ROTORS: NUMBER OF PORTS	3 / 4 / 5	3 / 4 / 5	3 / 4 / 5	3 / 4 / 5	4 / 5 / 6	4 / 5 / 6
ROTOR DIAMETERS	18" / 23"	23" / 25"	30" / 32" 35"	30" / 32" 37" / 39"	32" / 37" 39" / 42"	32" / 37" 39" / 42"
MAX. CRUSHING VELOCITY	305 FPS	305 FPS	315 FPS	315 FPS	315 FPS	300 FPS
ROCK TYPE CHAMBER	Fine /Coarse	Fine /Coarse	Fine /Coarse	Fine /Coarse	Fine /Coarse	Fine /Coarse
NUMBER OF ANVILS – ST/AR MODEL	15	16	17 / 18	18 / 20	19 / 21	19 / 21
APPROX. SHIPPING WEIGHT	13,000 lbs.	14,000 lbs.	30,000 lbs.	40,000 lbs.	45,000 lbs.	67,000 lbs.
ACCEPTABLE MAX. FEED SIZE	1.5" / 40 mm	2.0" / 50 mm	3" / 75 mm	3" / 75 mm	4" / 100 mm	4" / 100 mm

ACCESSORIES

O = OPTIONAL S = STANDARD N/A = NOT AVAILABLE

SERIES MODEL	310	1025	1530	4060	5080	9150
CRUSHER TOOLS	S	S	S	S	S	S
BALANCING MACHINE	S	S	S	S	S	S
TEMP. SAFETY SYSTEM	S	S	S	S	S	S
INTERNAL AIR TRANSFER	N/A	N/A	S	O	O	S
SUPPORT LEGS	O	O	O	O	O	O
SKID FRAME	O	O	O	O	O	O
SAFETY SERVICE PLATFORM	O	O	O	O	O	O
VIBRATION PROTECTION	S	S	S	S	S	S
DISCHARGE HOPPER	O	O	O	O	O	O
DUST COLLECTOR	O	O	O	O	O	O
SMARTBOX	O	O	O	O	O	S
HYDRAULIC ACCESS	S	S	S	S	S	S
NON-SUPPLY HYDRAULICS	O	O	O	O	N/A	N/A
ELECTRIC MOTOR STARTERS	O	O	O	O	O	O
AUTOMATION	O	O	O	O	O	O
VARI-SPEED CONTROL	O	O	O	O	O	O
OIL LUBRICATION	S	S	S	S	S	S
SERVICE CRANE / MANUAL	O	O	O	O	O	N/A
SERVICE HOIST ELECTRIC	O	O	O	O	O	O

ST/AR VSI

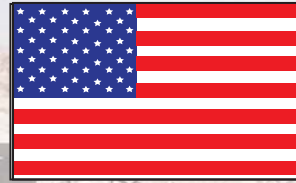
IMPORTANT APPLICATION INFORMATION AND GUIDELINES

- The capacities shown in this catalog are for REMco's semi-autogenous (rock-on-rock rotor to anvil chamber) and full hard parts (rock-on-steel shoe table to anvil chamber) VSI crushers only and are neither maximum nor minimum. Tonnages shown are based on processing material in a well-designed processing circuit with automated feed controls and adequate screening. Many factors effect capacity, such as rock hardness, type of rotor used, number of rotor ports, rotor speed, and size of drive motor(s) feed moisture content, etc. For metric capacities, multiply by factor of 0.9.
- **REMco** recommends conducting a crushing test prior to applying **ST/AR VSI** crushers, designing a crushing plant or crushing circuit. Contact REMco for details or visit www.remcovs.com to schedule such a test.
- Water in feed, in excess of 3 to 5 %, will reduce crusher performance, cause chamber packing, raise power demand and increase parts wear raising the operating cost.
- Maximum recommended feed size will vary dependent on type, hardness and shape of rock or ore to be crushed. Larger, angular feeds will reduce capacity; finer, cubical feeds will increase capacity. All feed size designations shown are for a maximum one-way dimension of the rock pieces.
- **ST/AR VSI** crushers can be operated in open or closed circuit. Closed circuit operation will produce the best results when crushing for optimum particle shape. Closed circuit operation will also yield the greatest net product and the best final product grading.
- **ST/AR VSI** machines are recommended for use in low abrasion, less aggressive materials. When the total abrasives content of the rock (silica, alumina and iron) exceeds 15% - 20%, operation may result in unacceptable wear costs. In these instances, REMco strongly recommends the use of a rock-on-rock chamber as in **REMco SandMax** and **RockMax** models.

The above applies to all **ST/AR VSI** models shown in this catalog. **REMco** reserves the right to change the capacities and specifications contained herein without prior notice.



A WORLDWIDE PRODUCT OF REMco
AN AMERICAN COMPANY



REMco ALSO OFFERS SPECIAL CRUSHER DESIGNS
FOR MINING, CONSTRUCTION MATERIALS AND THE
INDUSTRIAL MINERALS INDUSTRIES.
CONTACT **REMco** FOR DETAILS.



REMco machines are manufactured under the following United States patents -
Patent #7,427,042; Patent #7,489,254; Patent # 7,607,601; SA Patent #2008/05183
Additional International patents apply

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