DAKOTA® CONE CRUSHER

Secondary or Tertiary Crusher For Aggregate and Mining Applications.

FEATURES

» Standard 2-year/6,000 hr warranty protects costliest components.

» Backed by eager service team who respond quickly.

» High-grade steel components, which exceed industry standards.

» Committed to large inventory of parts for fast deliveries.

APPLICATIONS


Ore/Hard Rock Mining


Quarried Stone


River Gravel

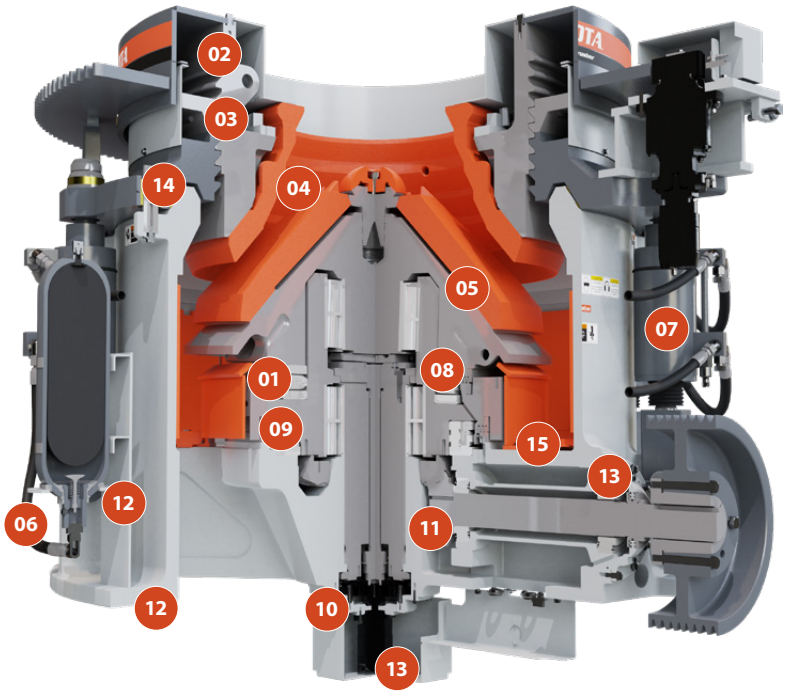

Recycle Concrete


Fractured Gravel


Cubical products


Super Pave Products

Wheeled
Stationary



01/ BEARING DESIGN
Bearing design efficiently converts horsepower to crushing forces and benefits from a more compact lube tank.

02/ LUBRICATED STEEL THREADED BOWL ASSEMBLY
Stronger and lubricated threads eliminate the requirement for bronze thread inserts and allows for the adjustment of crusher settings with no seizing or fretting.

03/ LEFT-HAND BOWL THREADS
Prevents the crusher from closing down if clamp pressure is lost.

04/ UNIVERSAL CRUSHING CHAMBER
Other than minor wear parts, design requires no major changeouts when transitioning from secondary and tertiary applications.

05/ RAISED CONE HEAD SEATING SURFACE
Machined surface can be reconditioned up to 3X without need for additional welding.

06/ TRAMP RELIEF SYSTEM
A single accumulator means reduced failure points and maintenance requirements with fast acting tramp event relief.

07/ INVERTED TRAMP RELIEF CYLINDERS
Reverse design ensures hydraulic seal is not exposed to contamination during operation.

08/ ENCLOSED WEDGE-PLATE ASSEMBLY
Protects against the flow of material, which alllows the crusher to maintain balance. Guarded to provide additional wear protection.

09/ STEEL LABRYNTH SEALS
Opposed to UHMW contact seals, non-contact labrynth seals prevent friction, wear and contamination.

10/ HYDRAULIC ANTI-SPIN MECHANISM
Prevents the head from spinning when there is no load in the crusher.

11/ SPIRAL GEAR SET
Proven to perform at higher speeds with less vibration and noise.

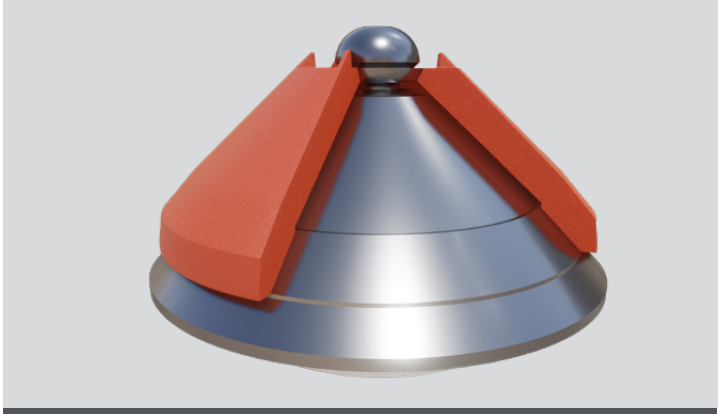
12/ ONE PIECE CAST MAIN FRAME
Removes any welding for highest possible strength and durability.

13/ INDEPENDENT CAST COUNTERSHAFT BOX
Incorporates roller bearings and Optimizes disassembly process for improved serviceability

14/ REPLACEABLE SEAT LINERS
Bronze liners protect mainframe and adjustment ring from wear.

15/ ARM GUARDS AND MAINFRAME LINERS
Replaceable AR400 wear parts that protect the mainframe casting from premature wear.

HIGHLIGHTS

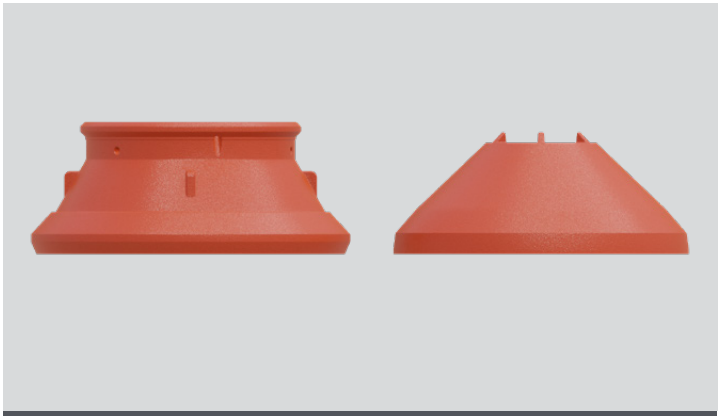


RAISED CONE HEAD SEATING SURFACE

» Allows reconditioning of head seating surface

INVERTED TRAMP RELIEF CYLINDERS

» Reverse design ensures hydraulic seal is not exposed to contamination during operation

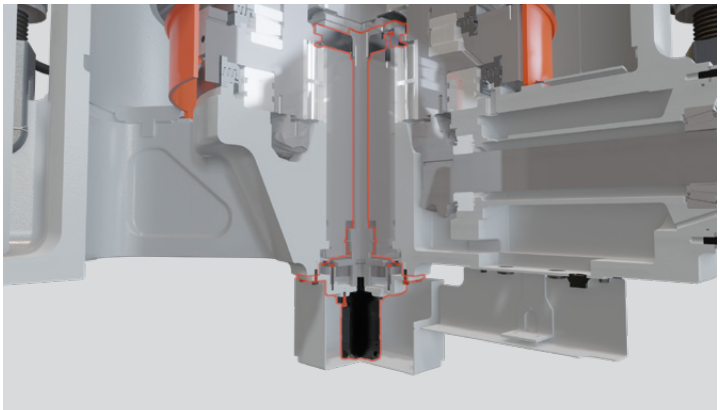


UNIVERSAL CRUSHING CHAMBER

» Application flexibility from secondary to tertiary

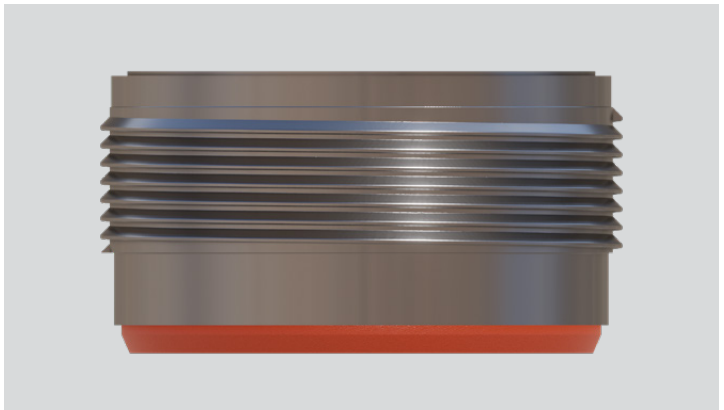
TRAMP RELIEF SYSTEM

» Reduce maintenance and points of failure with fewer accumulators



HYDRAULIC ANTI-SPIN MECHANISM

» Prevents head from spinning when no load in the crusher



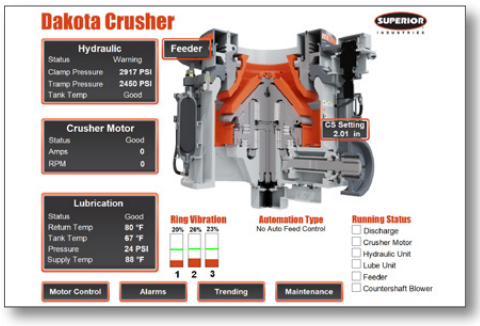
LEFT-HAND BOWL THREADS

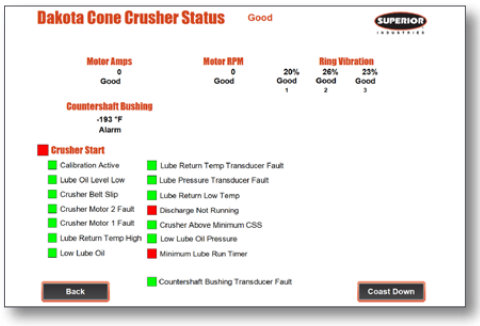
» Prevents catastrophic damage

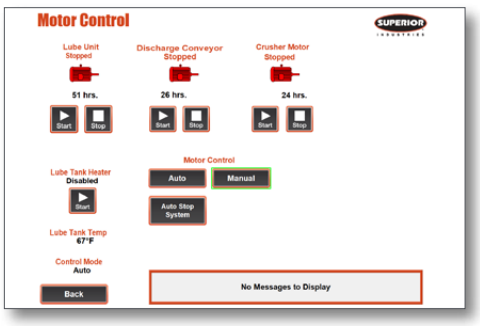
VANTAGE® AUTOMATION

ASK YOUR SALES REPRESENTATIVE FOR AN IN-DEPTH PRESENTATION TO EXPERIENCE ALL THE CAPABILITIES OF VANTAGE® AUTOMATION.

- One button auto-start or auto-stop motor control
- Startup and shutdown system in correct sequence every time
- No lengthy training, learn operation in minutes due to simple screen layout
- Automatically maintain optimum production conditions
- Alarms alert operators for conditions that need to be addressed
- All critical data listed on operators page
- Pre-assembled wiring for plug-and-play installation
- In-House design means fast support and custom programs
- Auto Level, power or adjust feature to maximize the crusher efficiency
- Wintermode maintains lube temperature while crusher is not running







CAPABILITIES

TRACK TO IMPROVE EFFICIENCY

- Motor amperage draw
- Closed side setting
- Anti-spin pressure
- Lube system health
- Hydraulic health
- History of alarms

ALARMS FOR HARMFUL CONDITIONS

- Lube temp, pressure, and level
- Hydraulic temp and level
- Tramp and clamp pressures
- Ring bounce
- Bowl float
- High anti-spin pressure
- Over amperage

PRECISE CONTROL

- Auto feed control
  - Auto level
  - Auto power
  - Auto setting
- Lube heaters- Scheduled start time
- Lube pump- Scheduled pump start
- Hydraulic pumps
- Oil cooler
- Drive motor
- Feeder motor - VFD signal-ready

SPECIFICATIONS

DAKOTA CONE CRUSHER GENERAL SPECIFICATIONS

Model	Head Diameter		Weight		Recommended HP		Max Feed Opening		Speed	
	mm	in	kg	lbs	kW	hp	mm	in	rpm	Min mtph
D350	1,219	48	20,870	46,000	260	350	305	12	750-950	155

OPEN CIRCUIT CAPACITIES

Min mtph	Max mtph	Min stph	Max stph
155	415	170	460

PERCENT PASSING

Model			CSS								
	in	mm	1/2"	5/8"	3/4"	7/8"	1"	1-1/4"	1-1/2"	1-3/4"	2"
D350	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	95	82	68	56	45
	1-1/4"			100	99	95	87	72	56	46	38
	1"		100	99	95	87	80	60	45	36	29
	7/8"		99	95	88	80	71	49	38	30	25
	3/4"		95	91	83	71	58	41	32	26	21
	5/8"		90	85	73	58	50	34	28	22	18
	1/2"		85	75	63	50	42	28	23	19	16
	3/8"		69	63	51	42	35	21	17	14	12
	5/16"		61	56	43	35	29	19	15	13	10
	1/4"		50	45	37	29	21	16	13	11	9
	#4		36	33	28	21	18	14	11	9	7
	0.16"		30	28	23	18	16	12	10	8	6
	#8		26	24	20	16	14	9	7	5	4
	#10		22	20	17	14	10	8	6	4	3
	#16		17	15	13	10	6	6	4	3	2
	#30		11	9	8	6	5	4	3	2	1.5
	#40		10	8	7	5	4	3	2	1.5	1
	#50		8	7	6	4	3.5	2	1.5	1	0.5
	#100		7	6	5	3.5	3	1.5	1	0.5	0.4
	#200		6	5	4	3	2	1	0.5	0.4	0.3

Feed size is determined by measuring the longest one-way dimension of the material sample.
Projected crusher gradings and capacities are based on a material having a work index of 12-14, with a bulk density of 100 lbs/ft ^{3} (1.6 mt/m^3). The feed grading must contain less than 20% passing the css for secondary and 10% passing the css for tertiary cone crushers. The crusher drive assemblies are to be maintained in good working order with the ability to apply all available horsepower without drive belt slippage. Plant installation to ensure the crusher is able to operate continuously consuming the FLA rating of the motor(s) with the equipment able to accept and discharge material freely. For secondary cone crusher applications to be used in closed circuit applications consult Superior for capacity adjustments.