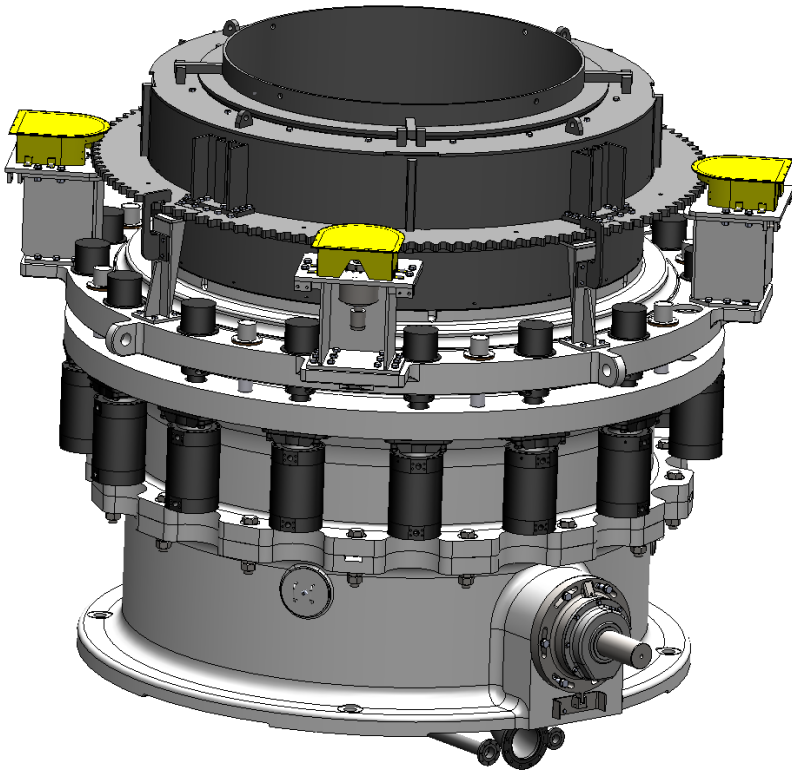
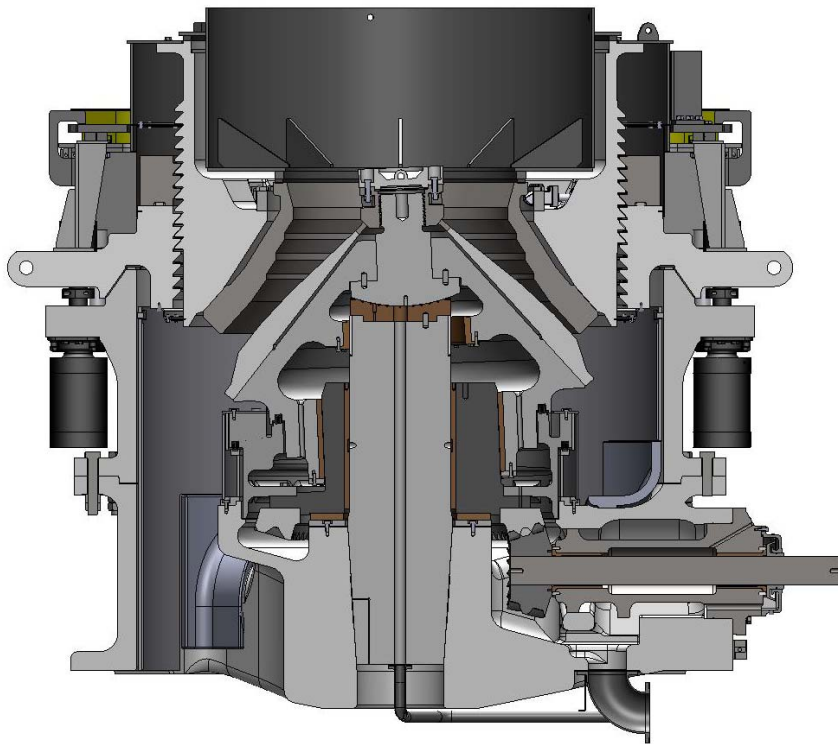


**Mining Magazine Congress 2010  
November 11<sup>th</sup> Perth Hyatt**



**XL 2000 CONE CRUSHER**  
**Real Results + Innovation**

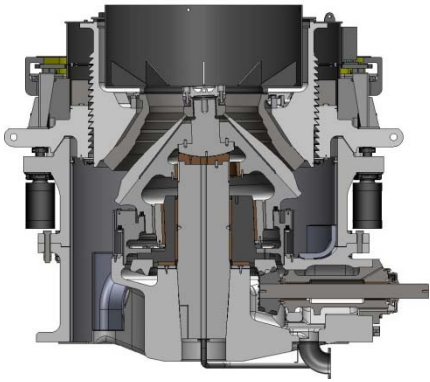
## **XL 2000 CONE CRUSHER**



### **WHY BIGGER?**

- **Lower Grades**
- **Higher Throughputs**
- **Dilution of Costs**

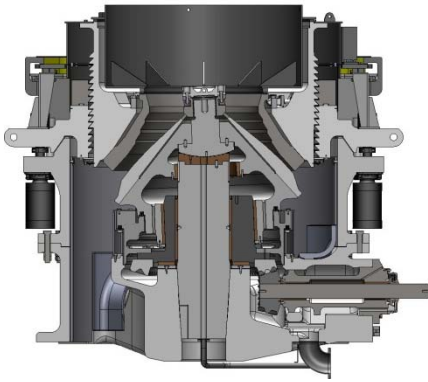
## XL 2000 CONE CRUSHER



### CURRENT REDUCTION CIRCUITS

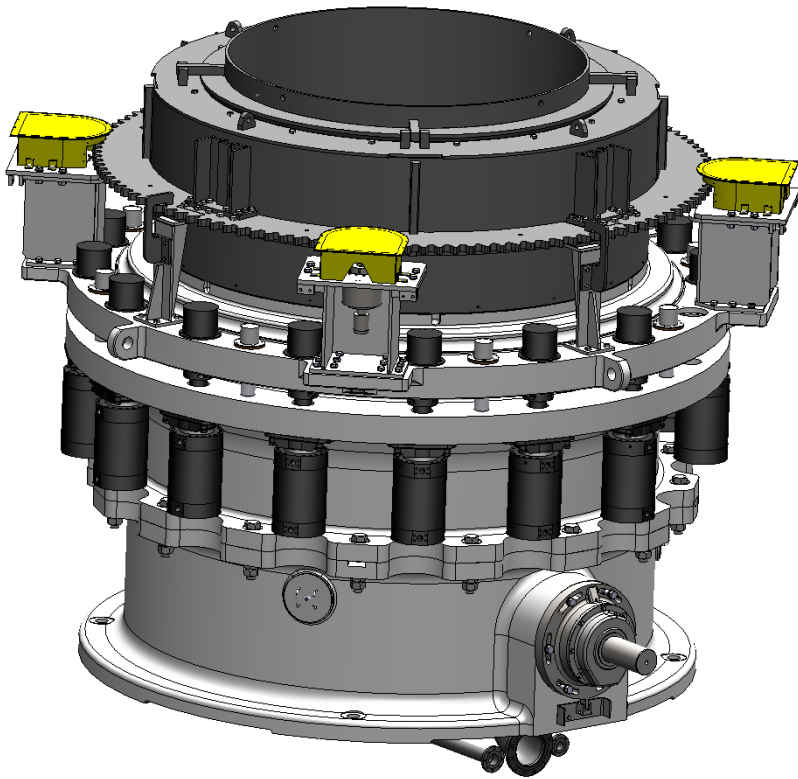
- **Primary Crusher/Sag Mill/Ball Mill**
- **Primary/Secondary/Tertiary Crush/Ball Mill**
- **Primary/Secondary/HPGR/Ball**
- **Primary/Secondary/Screen (Hematite)**

## XL 2000 CONE CRUSHER



- Early versions of the larger (84") machines were driven by 225kW (300 hp) motors.
- As technology progressed the drive on these units progressed to 375 kW.
- Following on from this, the advent of new design crushers moved power levels upward significantly using speed and throw as variables to allow additional connected power to be utilized.
- In the final analysis though there are limits that will prevent further usable power being added to a fixed head diameter - gravity cannot be increased!

## **XL 2000 CONE CRUSHER – KEY FEATURES**

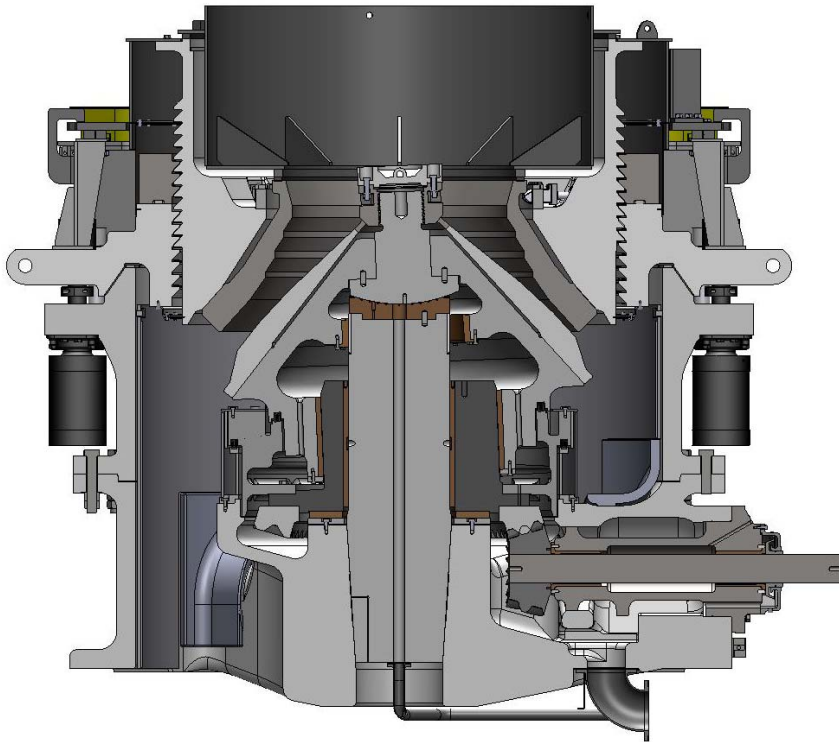


**2 Piece Main frame**

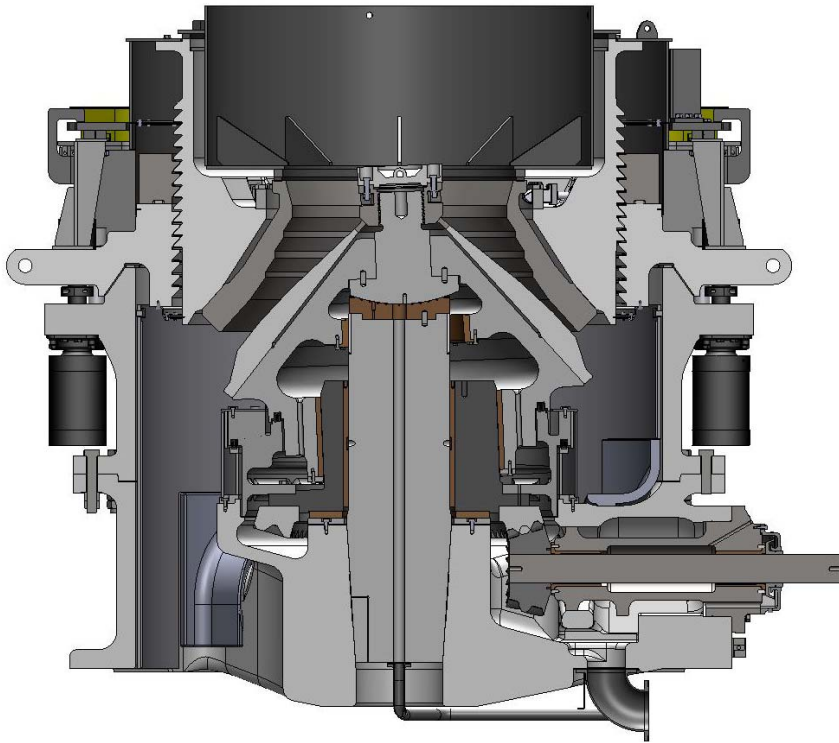
**Cooperation between our engineering teams in Pekin (cone design) and Bethlehem (gyratory design)**

## **XL 2000 CONE CRUSHER – KEY FEATURES**

- **Double the Capacity of Any Other FLSmidth Cone Crusher**

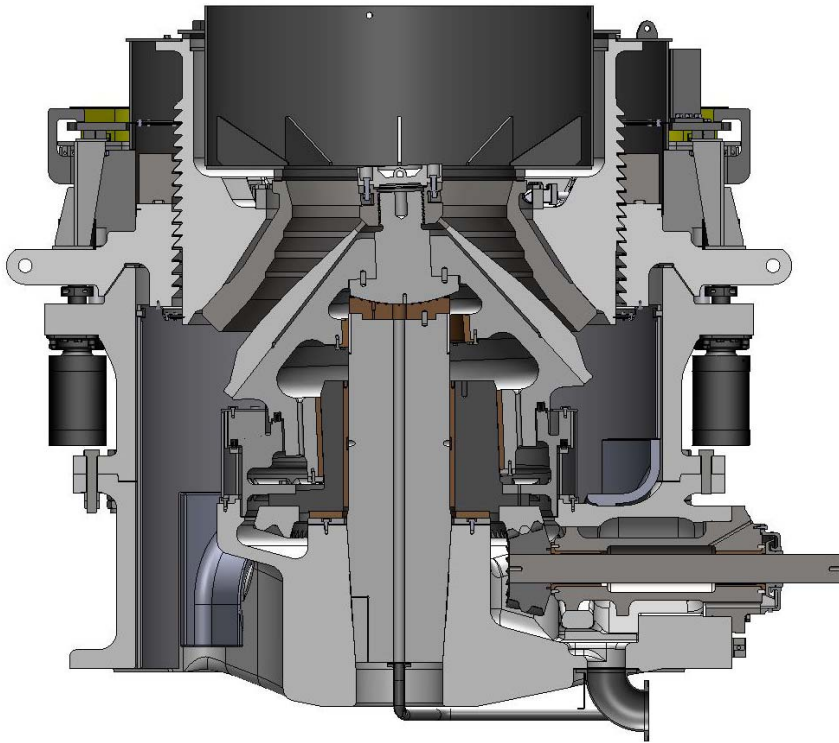


## XL 2000 CONE CRUSHER – KEY FEATURES



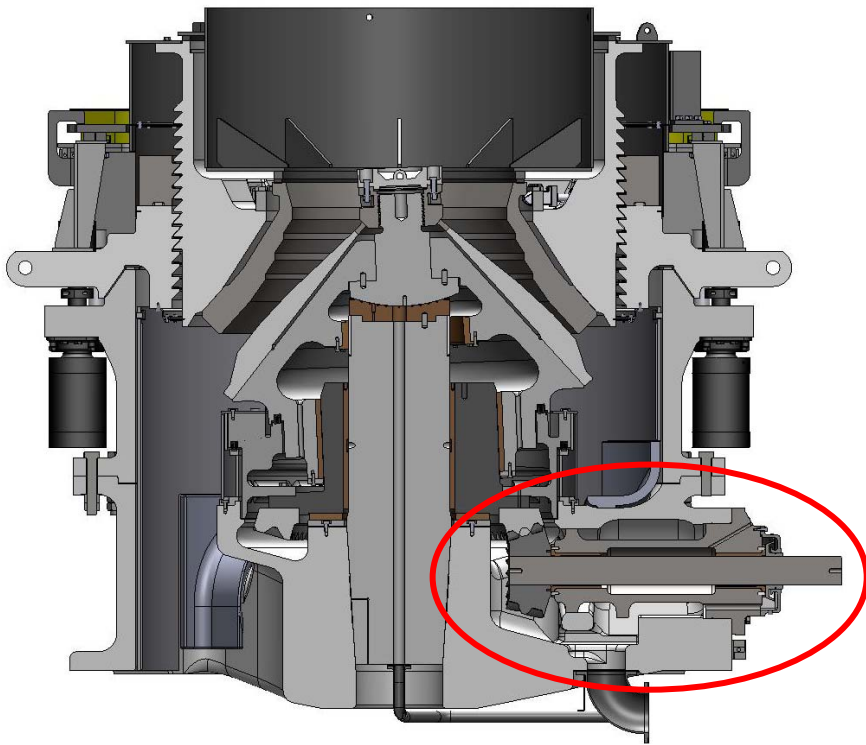
- Double the Capacity of Any Other FLSmidth Cone Crusher
- Crushing Force: 1.9M kg (4.2M lbs)
- (XL1100: 1.0M kg (2.2M lbs))

## XL 2000 CONE CRUSHER – KEY FEATURES



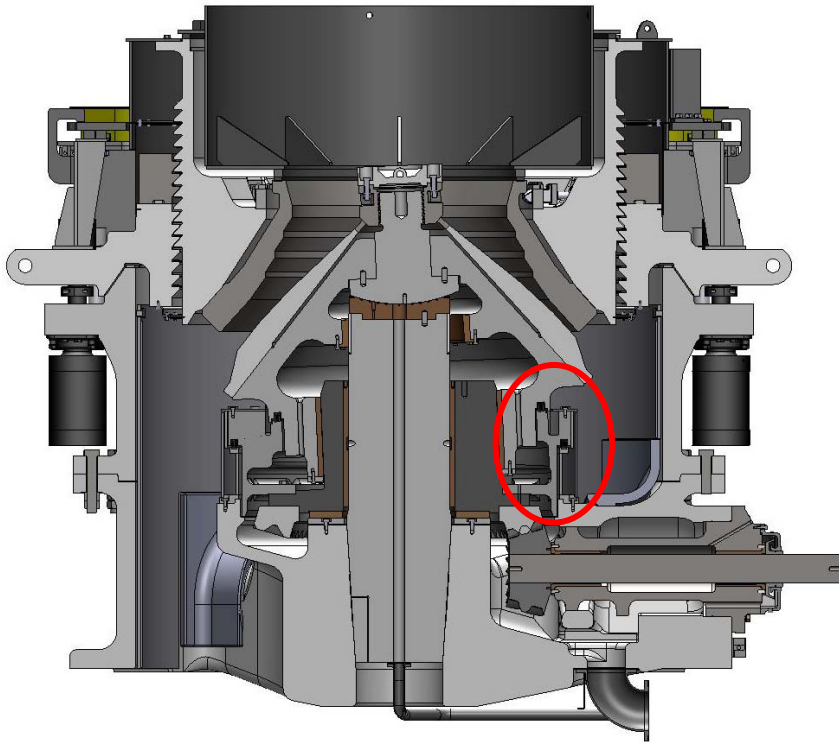
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- Crushing Force: 1.9M kg (4.2M lbs)  
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- Significant Eccentric Throw and High Pivot Point Crushing Action
- **Integral Countershaft Assembly**

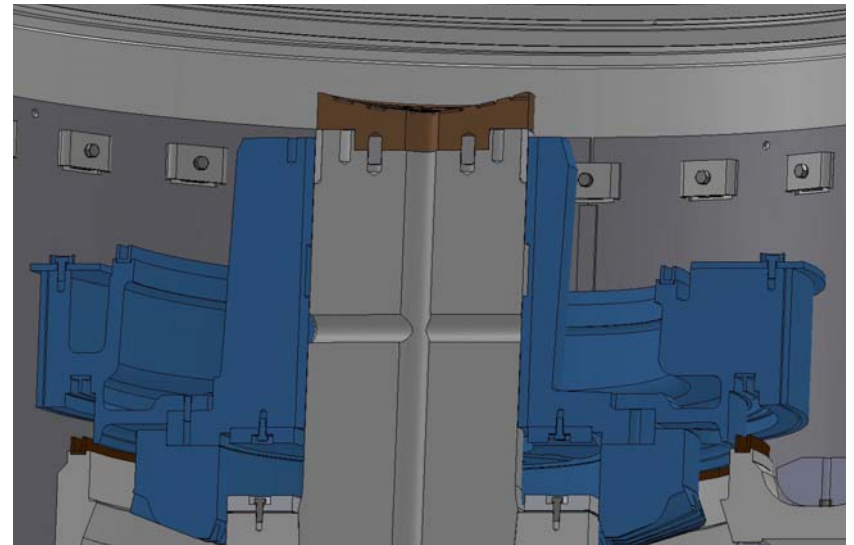
## XL 2000 CONE CRUSHER – KEY FEATURES



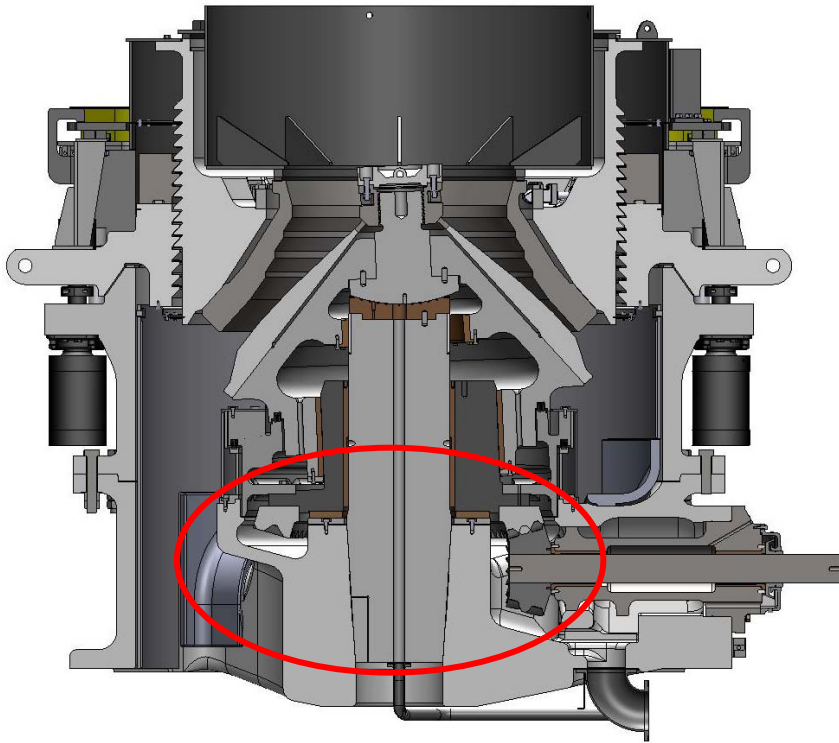
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- Integral Countershaft Assembly
- Enclosed Counterweight Assembly with Replaceable Non-contacting T&U Seal Arrangement

## **XL 2000 CONE CRUSHER**

View showing details of the updated sealing arrangements and socket liner fixing

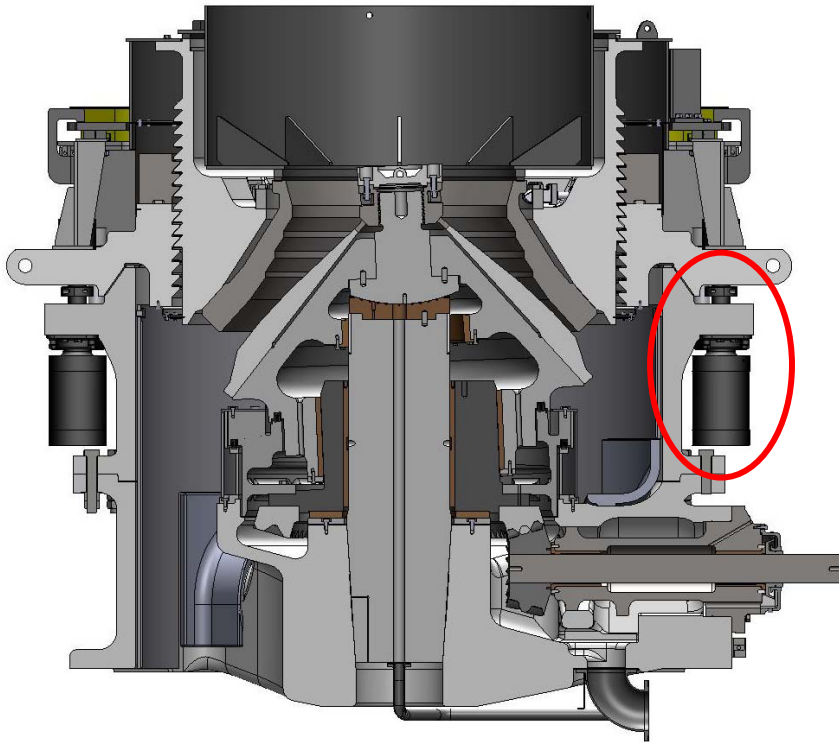


## XL 2000 CONE CRUSHER – KEY FEATURES



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- **Spiral Bevel Gearing**

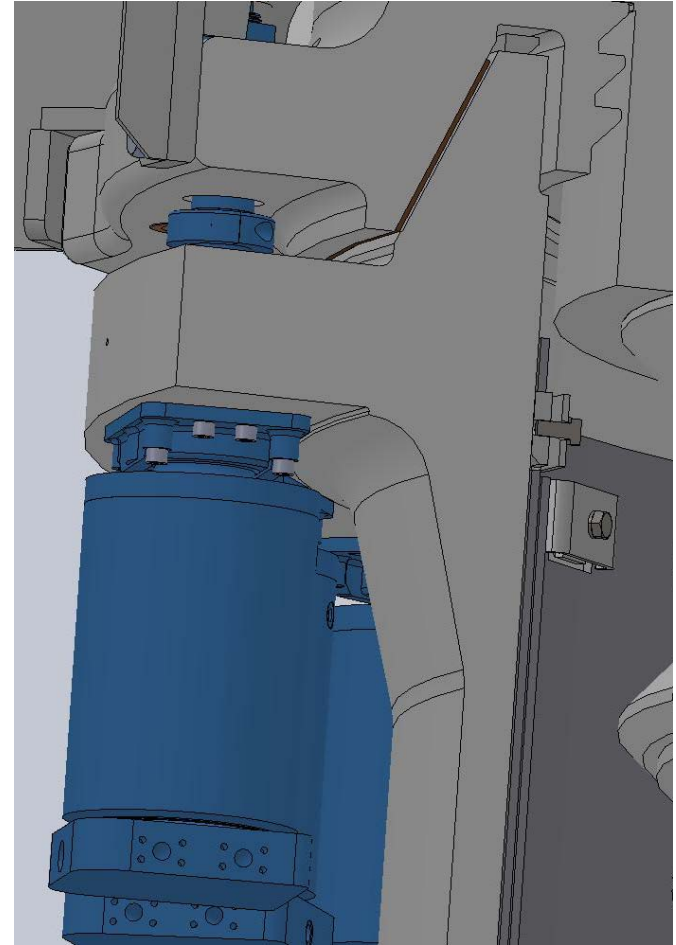
## XL 2000 CONE CRUSHER – KEY FEATURES



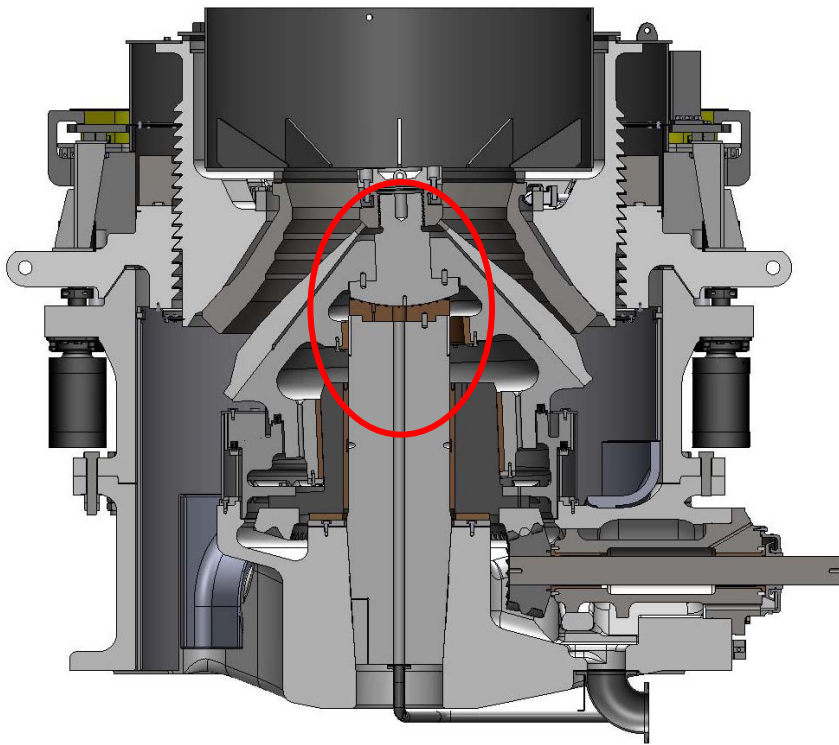
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- Enclosed Counterweight Assembly with Replaceable Non-contacting T&U Seal Arrangement
- Spiral Bevel Gearing
- **NEW Double Acting Tramp Release and Clearing Cylinders (patent pending)**

## **XL 2000 CONE CRUSHER**

View showing details of the  
double acting tramp  
cylinder fixing arrangement

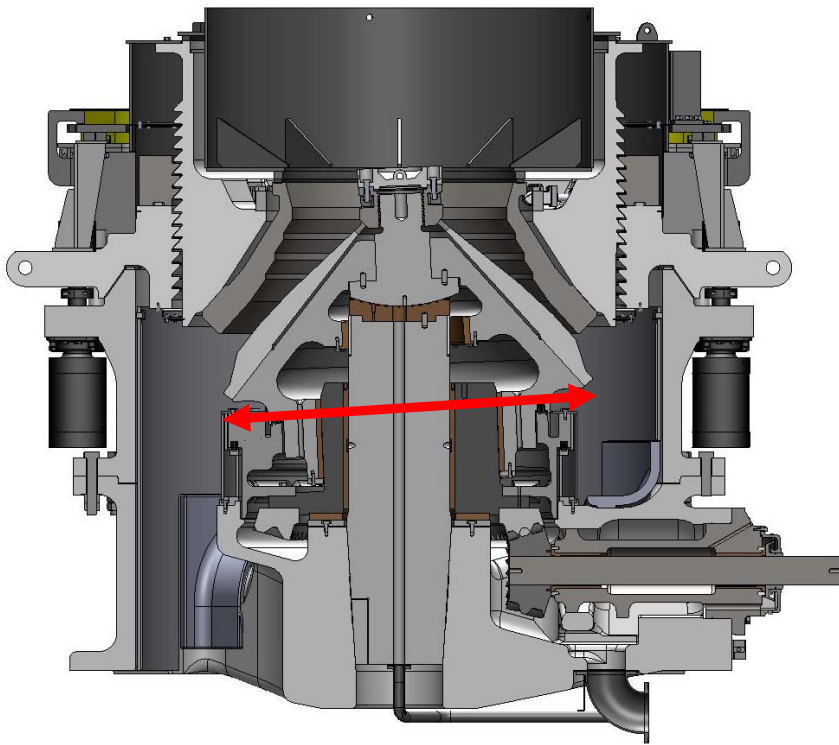


## XL 2000 CONE CRUSHER – KEY FEATURES



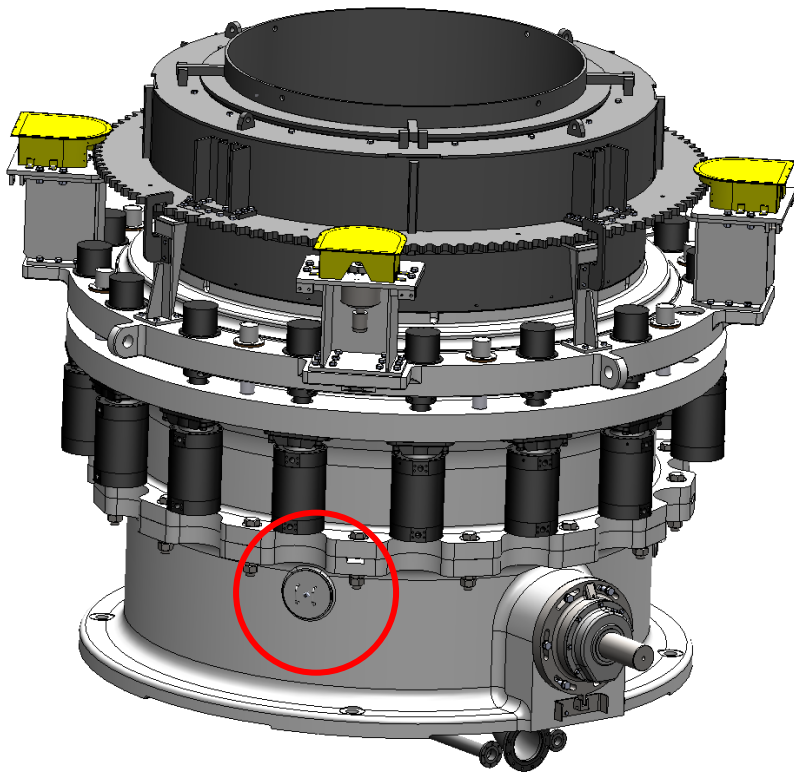
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- NEW Double Acting Tramp Release and Clearing Cylinders (patent pending)
- NEW Easy Access to Critical Load Carrying Bearings

## XL 2000 CONE CRUSHER – KEY FEATURES

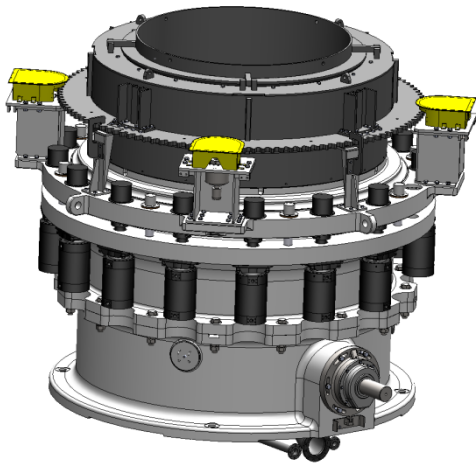


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- NEW Double Acting Tramp Release and Clearing Cylinders (patent pending)
- NEW Easy Access to Critical Load Carrying Bearings
- **2800 mm (110 in) Head Diameter**  
(XL1100: 2280 mm (90 in) Head Diameter)

## XL 2000 CONE CRUSHER – KEY FEATURES



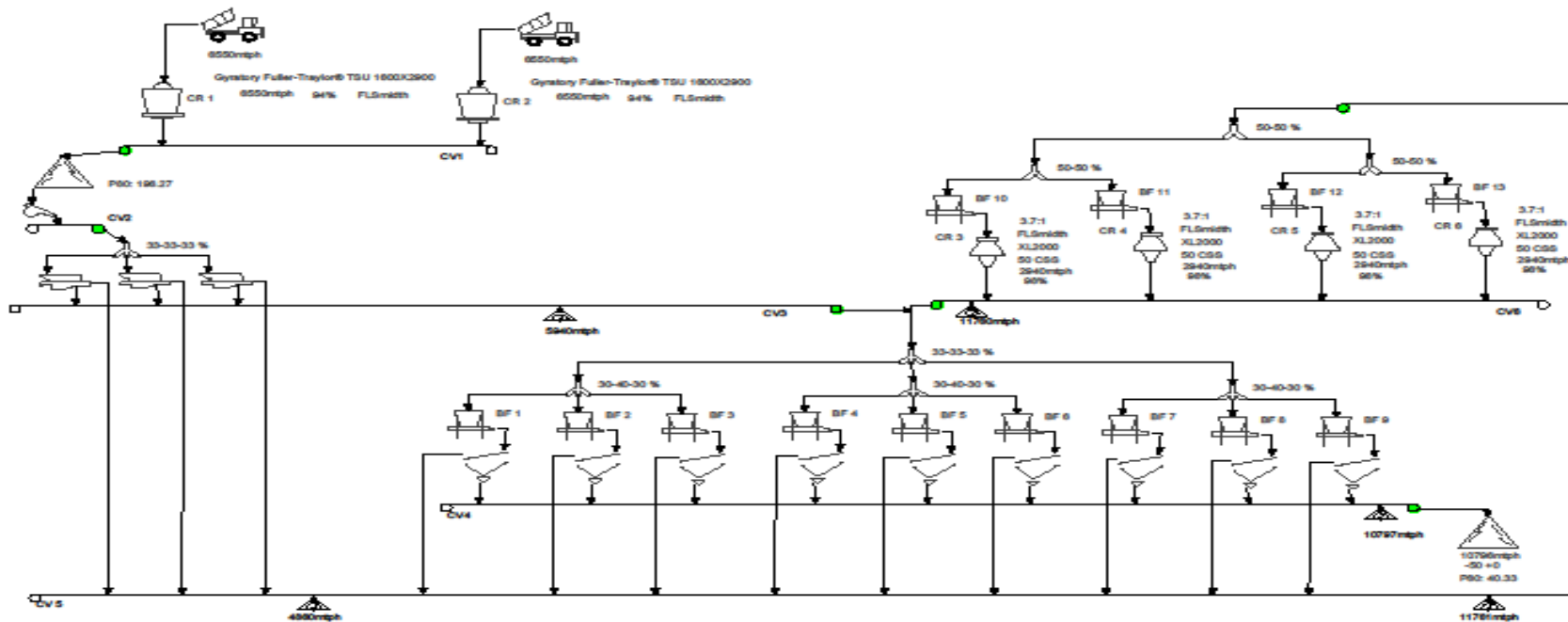
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- Spiral Bevel Gearing
- NEW Double Acting Tramp Release and Clearing Cylinders (patent pending)
- NEW Easy Access to Critical Load Carrying Bearings
- 2800 mm (110 in) Head Diameter  
(XL1100: 2280 mm (90 in) Head Diameter)
- **Main Frame Inspection Ports**



XL1100 Raptor®			XL1300 Raptor®			XL2000 Raptor®		
Setting (mm)	mtph (Min)	mtph (Max)	Setting (mm)	mtph (Min)	mtph (Max)	Setting (mm)	mtph (Min)	mtph (Max)
13	550	800	13	650	945	13	1000	1470
16	620	870	16	735	1030	16	1150	1600
19	700	950	19	825	1125	19	1290	1760
22	790	1200	22	945	1420	22	1470	2200
25	895	1295	25	1060	1530	25	1650	2400
32	1150	1400	32	1360	1650	32	2120	2580
38	1170	1450	38	1385	1710	38	2160	2680
45	1300	1600	45	1540	1890	45	2400	2960
RR	4 to 6	2 to 4	RR	4 to 6	2 to 4	RR	4 to 6	2 to 4

As indicated above for 1.6 Tonnes/m<sup>3</sup> and impact work index of 114 – 16 kWhr/tonne

# 190,000 TPD HPGR Circuit

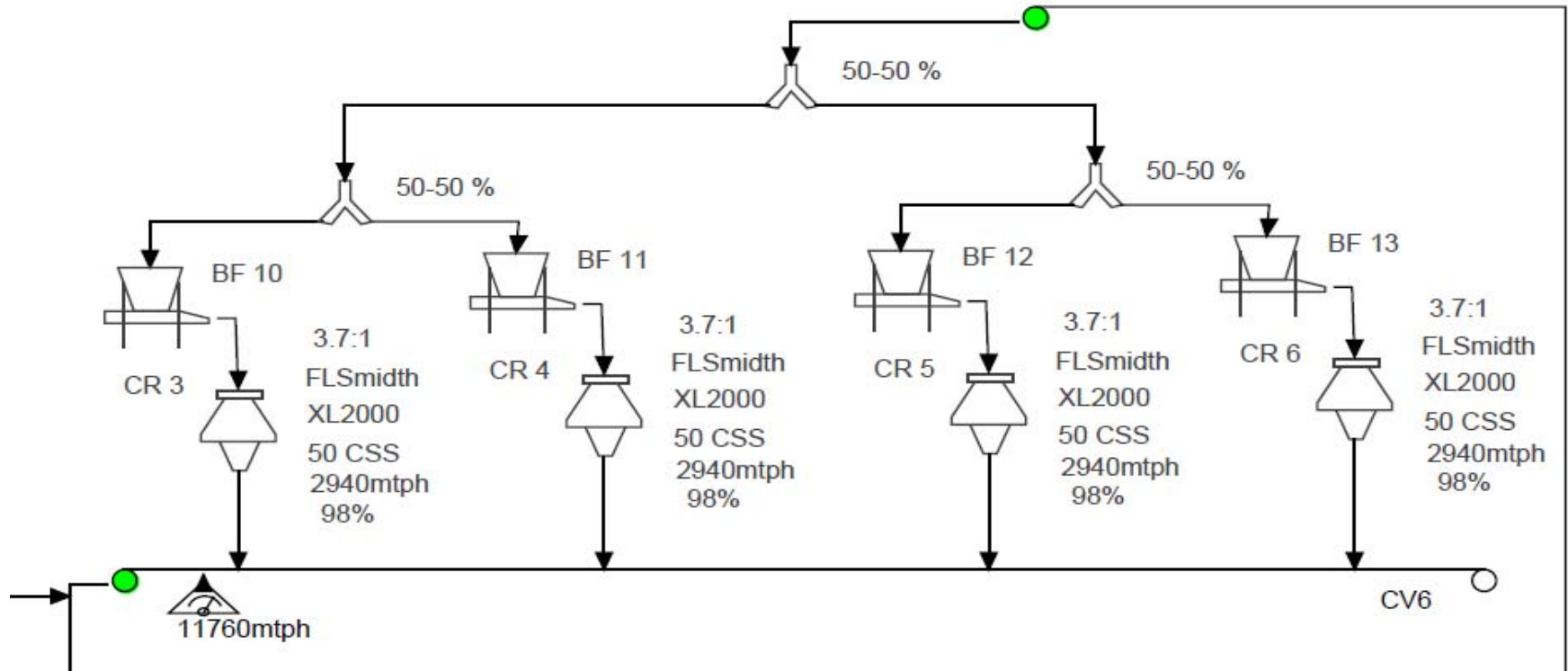


Calculation results may differ due to variations in operating conditions and application of crushing and screening equipment. This information does not constitute an express or implied warranty, but shows results of calculations based on information provided by customers or equipment manufacturers. Use this information for estimating purposes only.

All calculations performed by AggFlow. <http://www.AggFlow.com>

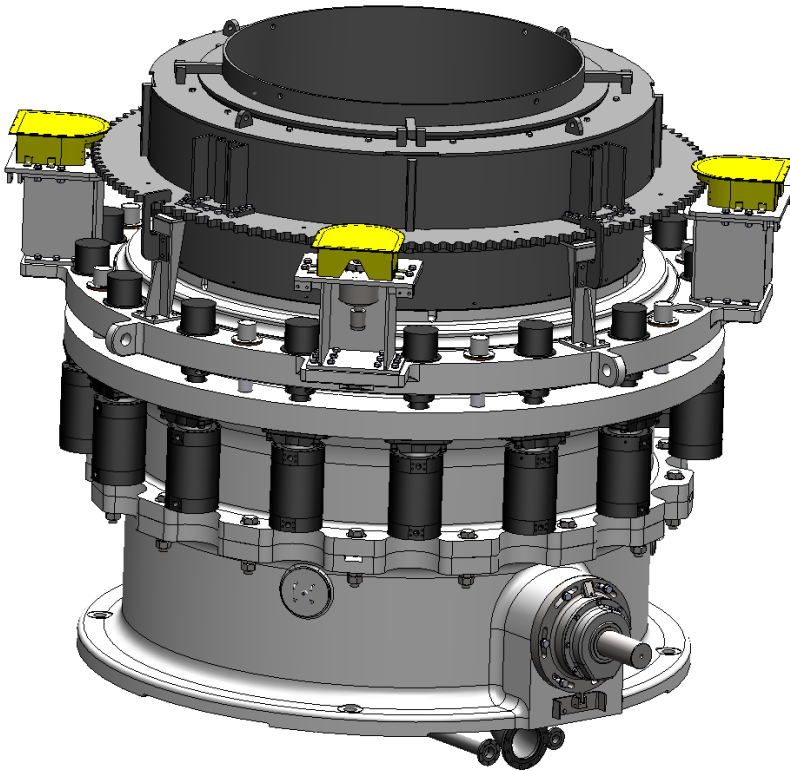
**FLSmidth**  
 190,000 MTPD XL2000 ONLY PROPOSAL  
 ROM Hard Blocky PG OSS of 225mm 50mm feed to HPGR  
 Date: September/29/2010

# XL 2000 CONE CRUSHER – HPGR FEED @ 190KTPD



# **XL 2000 CONE CRUSHER**

**Real Results + Innovation**



# **Thank you**