

# GRINDING MEDIA CHARGERS FOR MILLS

Document no :

2025-BALL-FEEDER-100

Date :

07.01.2025



## CENTERCONE MACHINERY INDUSTRY AND TRADE LIMITED COMPANY

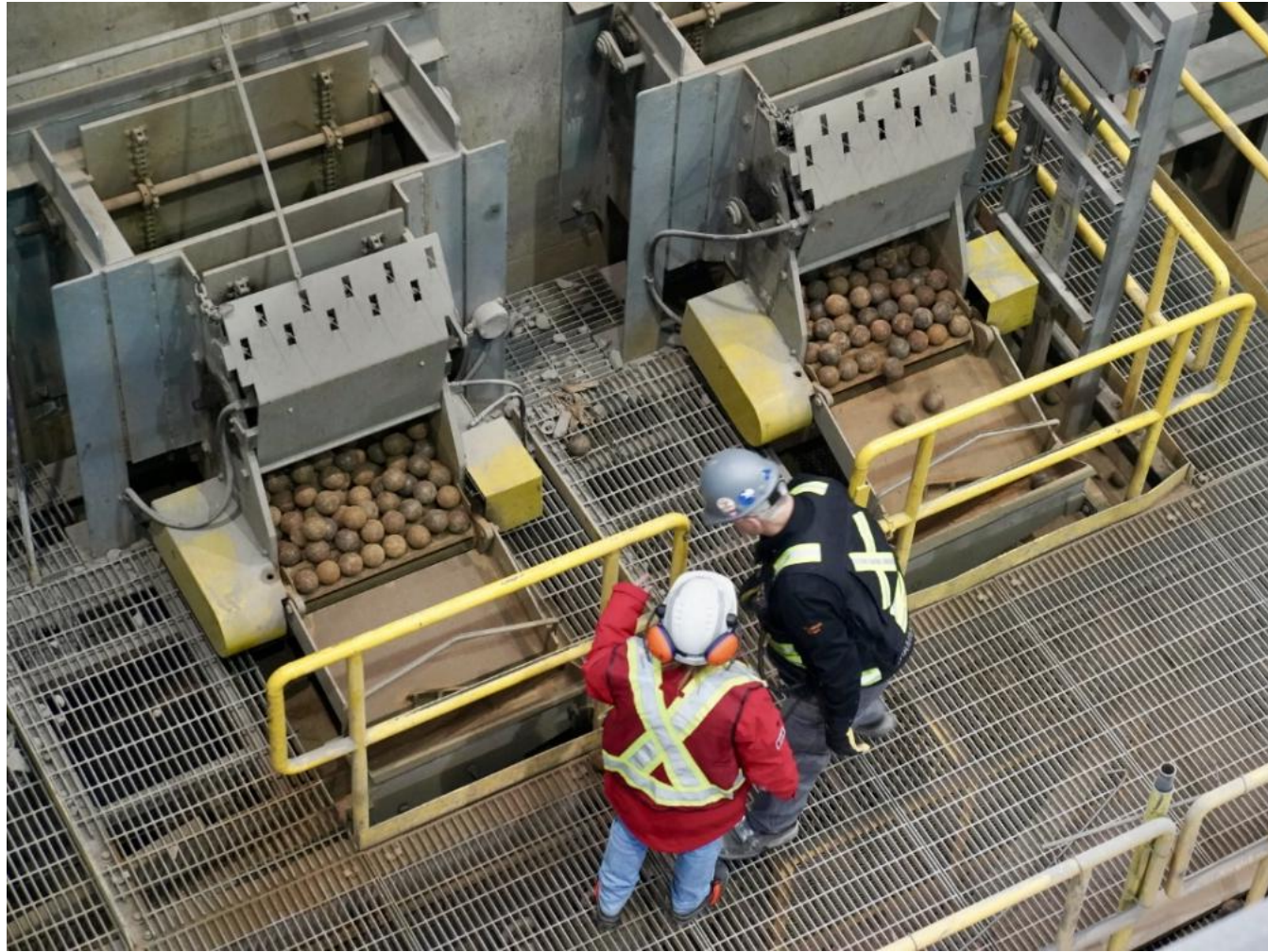
**Main Office & Workshop ;** Velibaba mahallesi, Mimar Sinan Caddesi, Velibaba Sanayi Sitesi, F Blok No:9 Pendik, İstanbul

**Email :** [info@centercone.com](mailto:info@centercone.com); [sales-mx@centercone.com](mailto:sales-mx@centercone.com)

**Tel :** +90 535 566 48 00 / +90 544 762 48 09 / +90 216 583 09 31



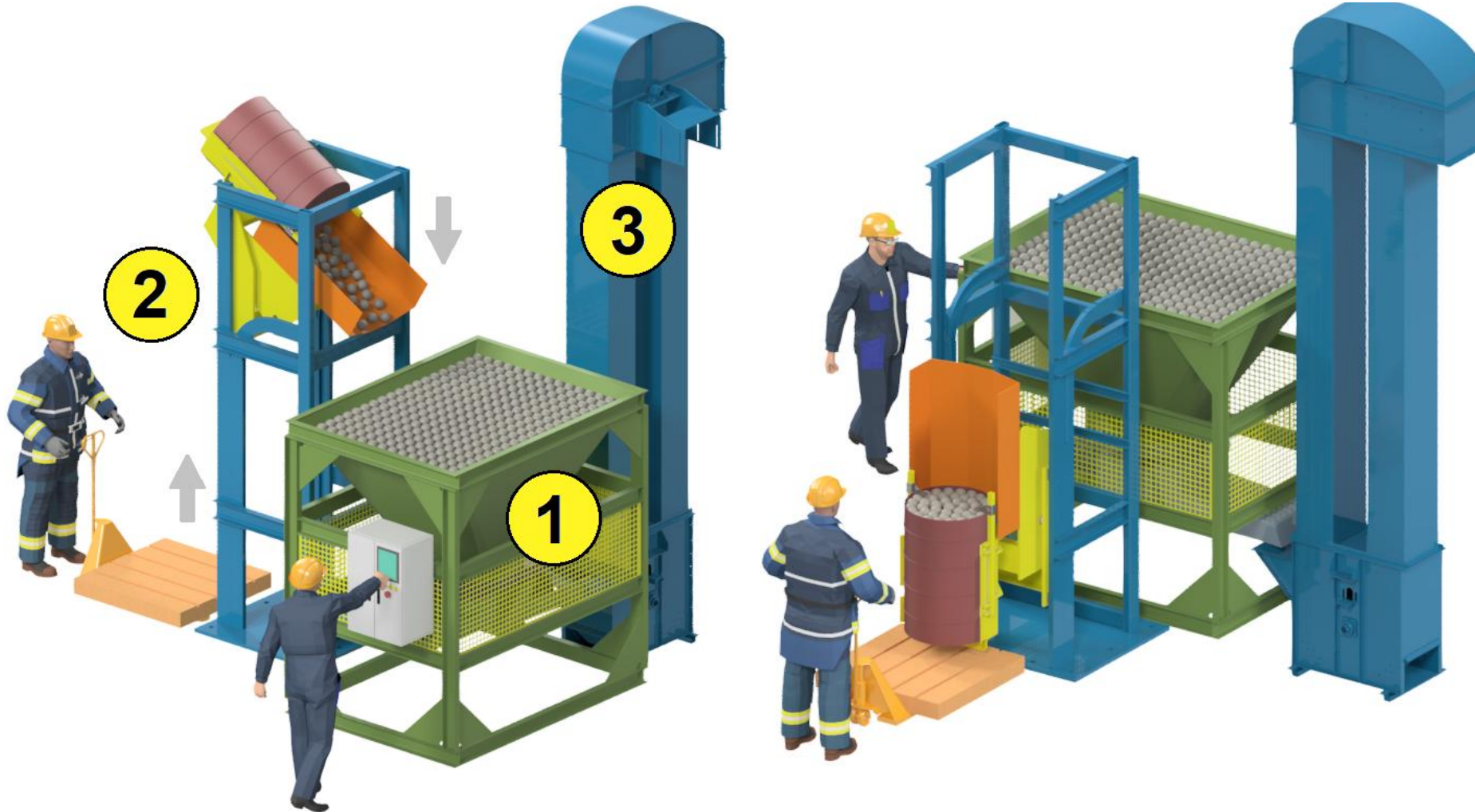
# AUTOMATIC BALL FEEDING SYSTEMS FOR MILLS



**BALL LOADING UNITS:** Balls that wear out during grinding in ball mills should be regularly supplemented with new balls. Irregularity in ball feeding affects the grinding regime in a bad way and reduces ore gain. We supply automatic ball feeding units to your grinding plants.



# AUTOMATIC BALL FEEDING SYSTEMS FOR MILLS



**1) BALL LOADING UNIT :** It provides automatic feeding of grinding balls to mills. It offers grinding efficiency and work safety advantages with regular ball loading. It is suitable for ball feeding with a diameter of  $\varnothing 20-150$  mm. Optional models with rotary feeder, belt feeder, vibrating feeder, multiple or single ball feeder are available according to customer demand or facility design. All Ball feeders models are equipped with loadcells, ensuring optimal dosing of grinding media.

## **2) BARREL UNLOADING UNIT :** **(Optional)**

When the balls are supplied with the barrel, the barrel is unloaded to ball hopper by a lifting and tilting equipment without a crane or forklift requirement.

## **3) VERTICAL CONVEYOR :** **(Optional)**

By using a bucket elevator or a cleated vertical belt conveyor, the barrel unloading system and the ball loading unit can be placed on the concrete floor and the ball can be transferred to the upper platform where the mill feed belt conveyor or mill feed chute is located.

Alternatively, the barrel unloading system can be placed on the concrete floor and the lifting height increased, the ball loading unit can be placed on the upper platform where the mill feeding group is located, in which case an elevator is not needed.



# AUTOMATIC BALL FEEDING SYSTEMS FOR MILLS



Hopper for Ball Bogs and Kibble (Metso)

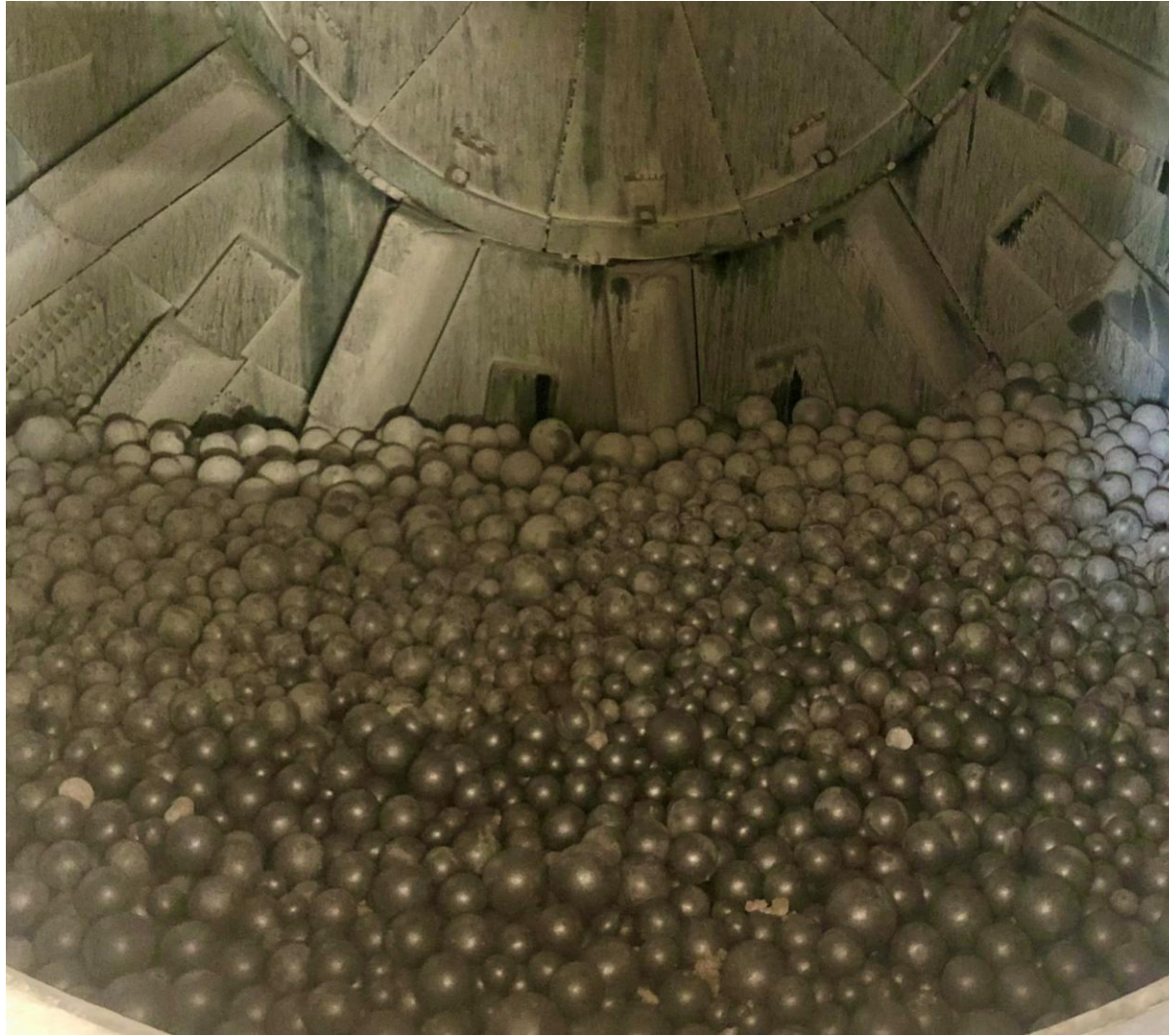


Forklift – Barrel Tilter Apparatus

If the balls are supplied with bogs instead of barrels, hopper can be used to tear apart the bog to unload the balls inside to hopper. From the control gate these balls can be transferred to ball loading kibble. The loaded kibble can be used to transfer the ball feeder hopper or ball loading location when required.



# AUTOMATIC BALL FEEDING SYSTEMS FOR MILLS



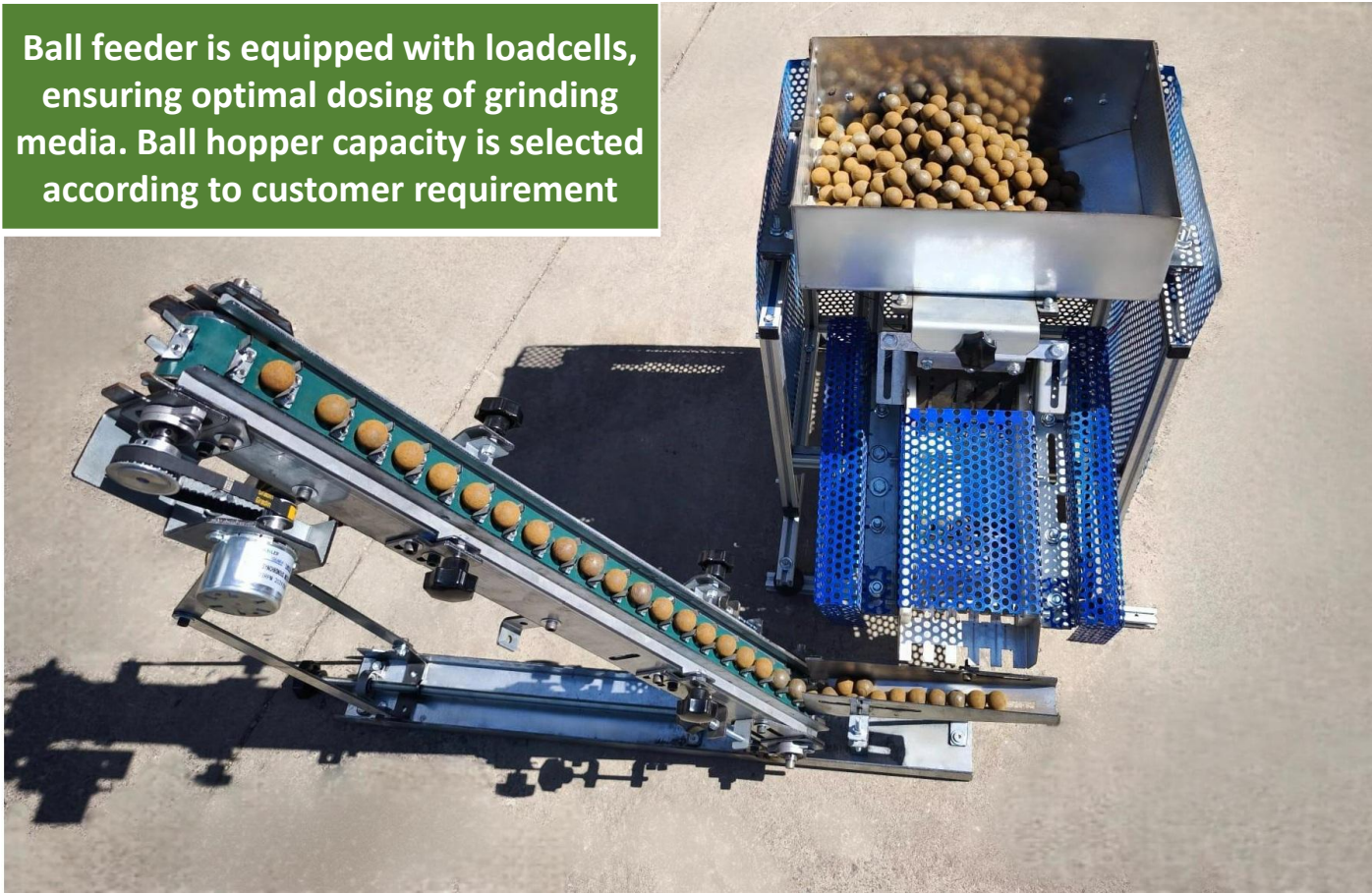
## **BALL CARRYING BASKETS: (BALL LOADING KIBBLE)**

Grinding balls are stored in reinforced concrete chambers and filled into ball baskets with a magnet crane. When the ball feeding baskets are lifted by crane, the lower part becomes closed automatically and the balls are moved to the desired location. When the balls are placed on the chassis to be unloaded, the lower part is automatically opened and the transfer of the balls from one point to another is ensured.



# PILOT SIZE BALL FEEDER TEST UNIT : FOR SINGLE BALL FEEDING AT A TIME ADJUSTABLE ANGLE CONVEYOR

Ball feeder is equipped with loadcells, ensuring optimal dosing of grinding media. Ball hopper capacity is selected according to customer requirement



In areas where the platform height is narrow, or if the feeding area is at a high level, or in processes where balls need to be fed one by one in a controlled manner, our ball feeding units can be modified to feed multiple or single balls with a belt conveyor whose belt angle can be adjusted between 0-90 degrees, in addition to the ball feeding unit. The feeding speed of the feeder unit or conveyor can be adjusted by the operator according to the process.



## EXAMPLE MILLS USING BALL FEEDERS AND BALL SORTERS



**VERTIMILL**



**VERTIMILL**

For fine grinding mills, ball feeders are also available for grinding balls with 5 mm to 40 mm diameter.

# EXAMPLE MILLS USING BALL FEEDERS AND BALL SORTERS



**HIGMILL**



**VXP MILL**



**Metso-Outotec : HIGMILL**

We also supply ball discharging, ball storage and ball transfer units for fine grinding mills with material feed from bottom, such as Metso-Outotec : HIGMILL

For fine grinding mills, ball feeders are also available for grinding balls with 5 mm to 40 mm diameter.



# EXAMPLE MILLS USING BALL FEEDERS AND BALL SORTERS

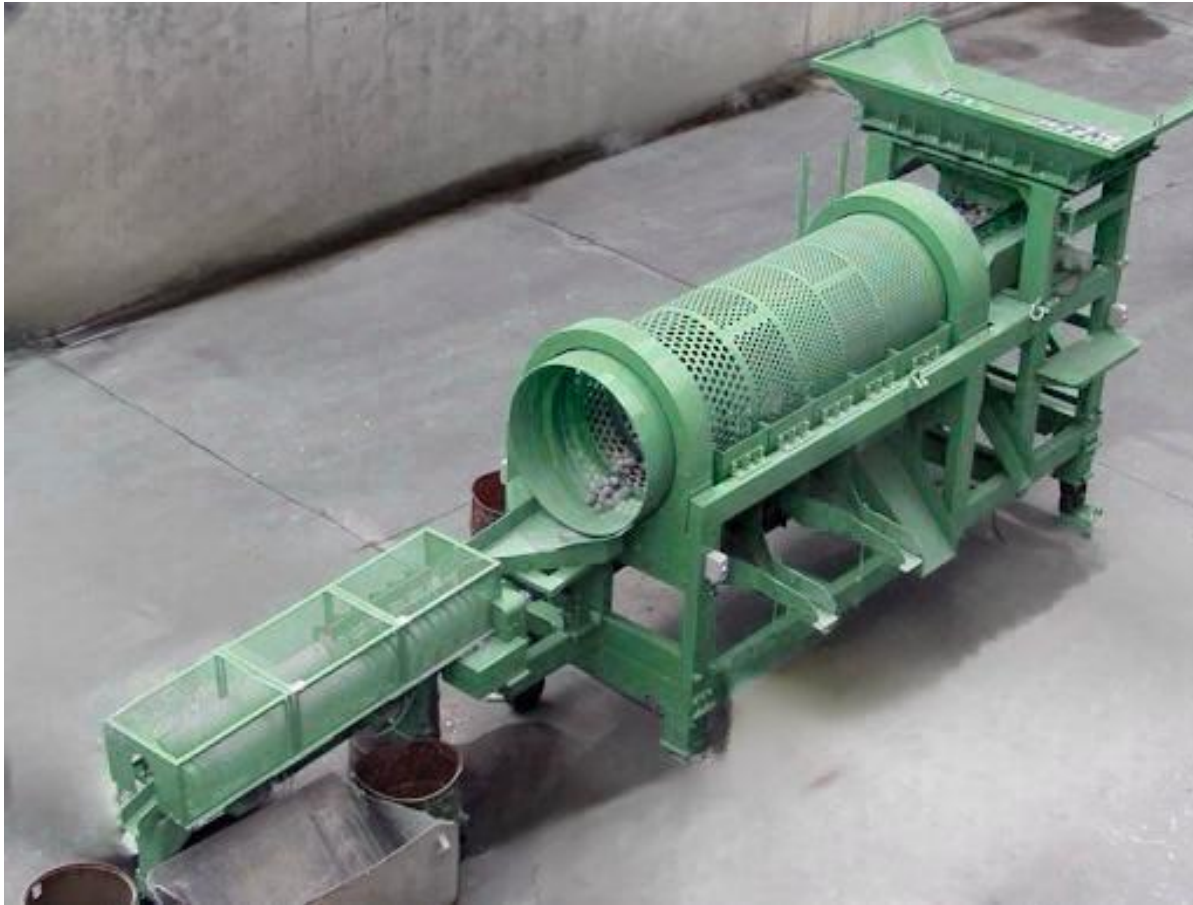


**Glencore : ISAMILL**

For fine grinding mills, ball feeders are also available for grinding balls with 5 mm to 40 mm diameter.



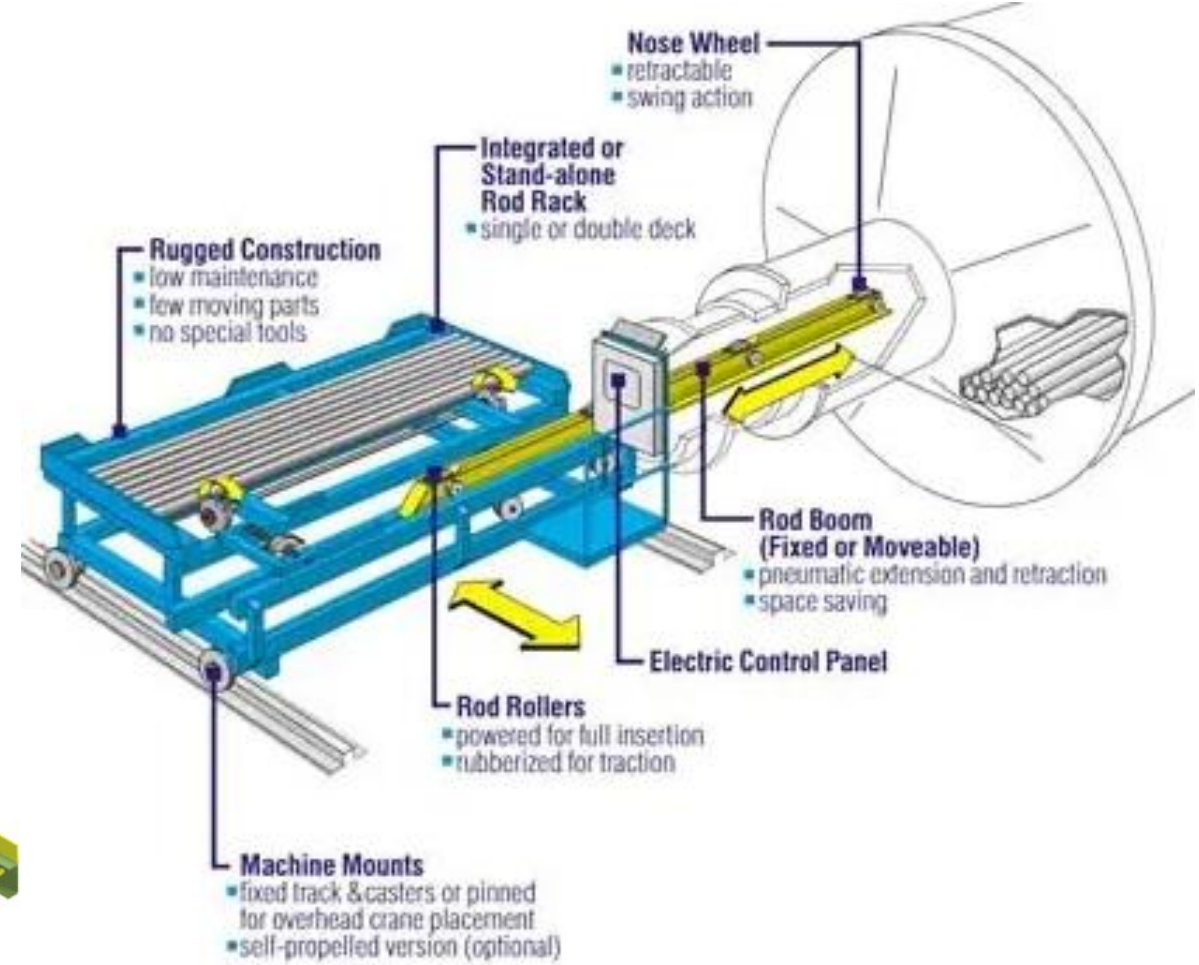
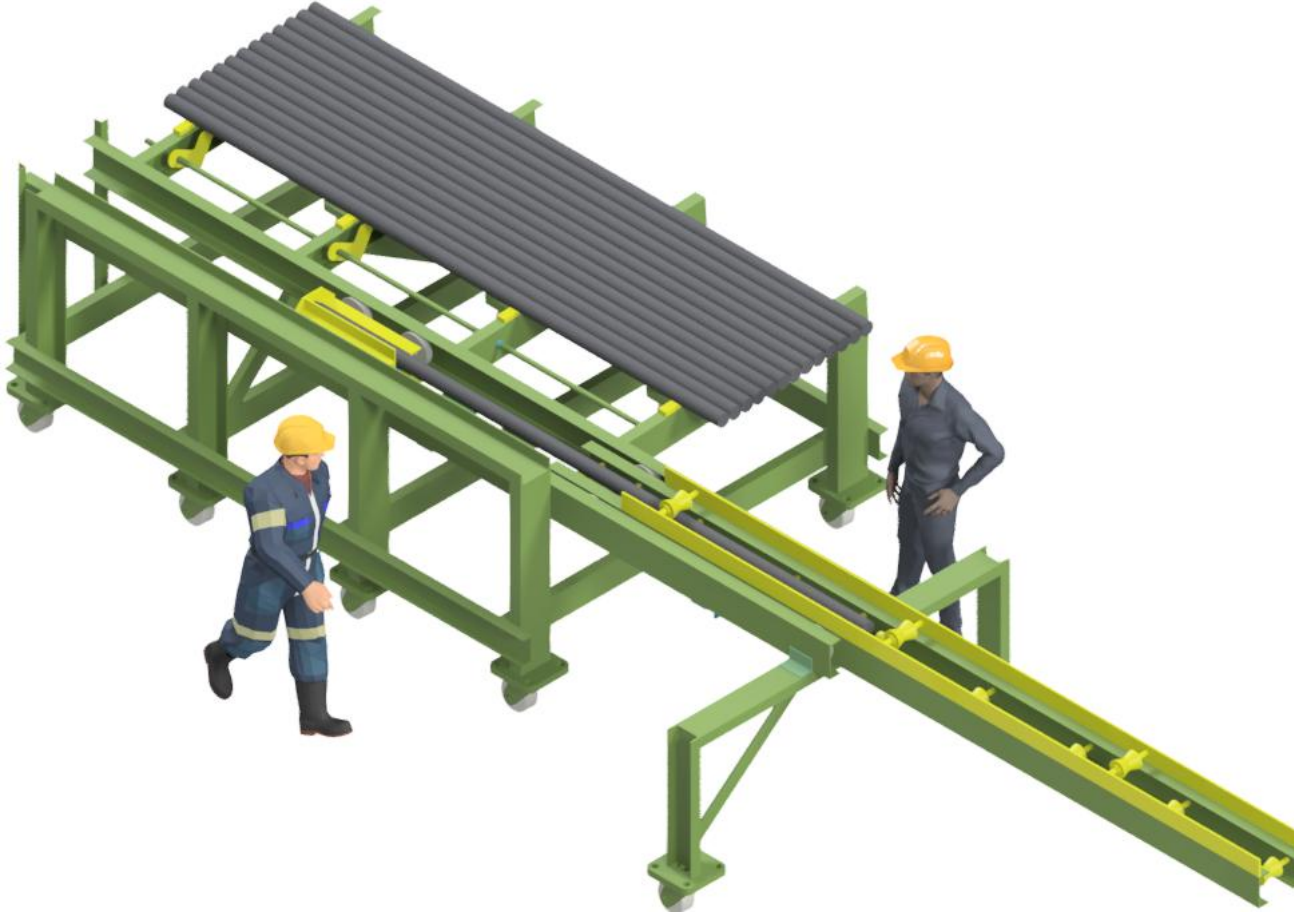
## AUTOMATIC BALL SORTERS



Ball sorters are used to separate the ball scats away from the reusable balls. They are especially used for ; fine wet grinding applications for mills such as Vertimills, SMD mills, Isamill and cement mills which is a dry grinding process. If you are having trouble with ball feeding, ball sorting and rod feeding applications contact us for tailored made solutions fit to your process !



# AUTOMATIC ROD FEEDING SYSTEMS FOR MILLS

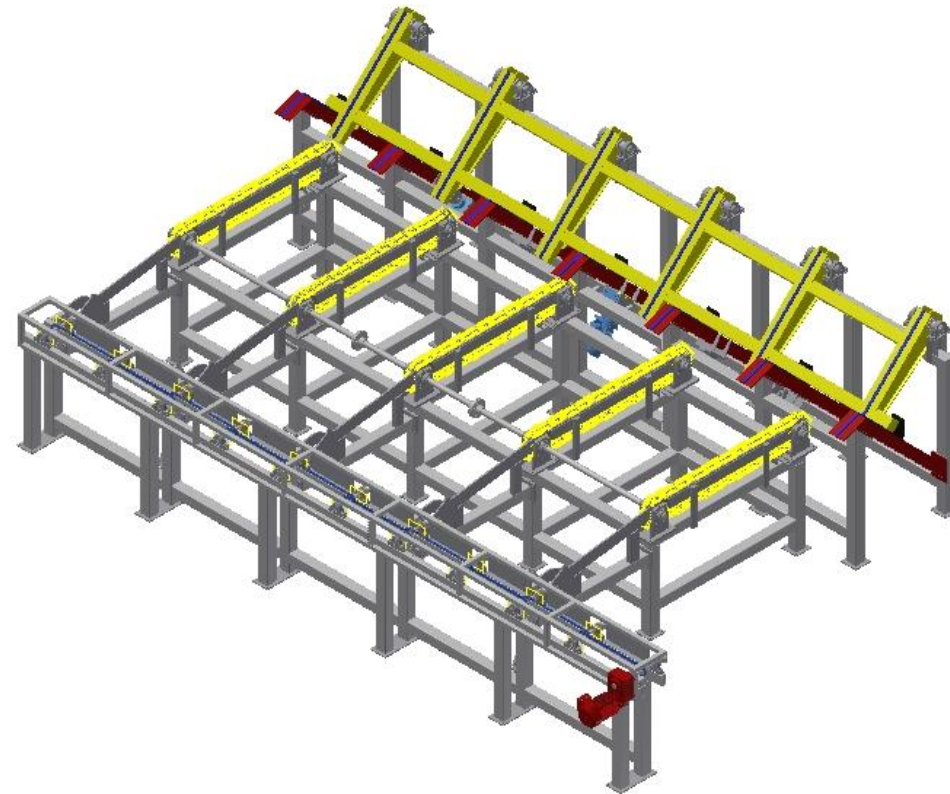
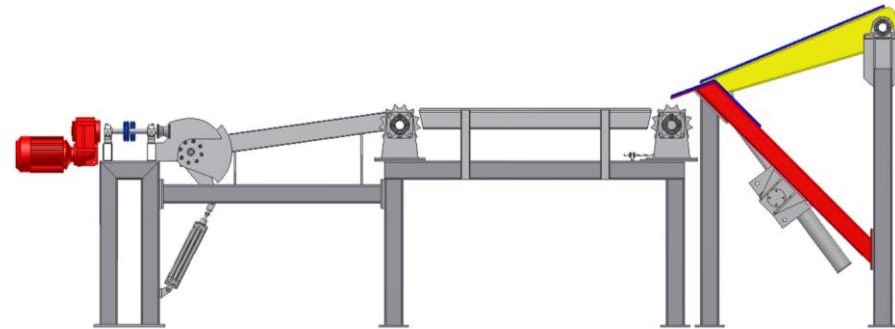
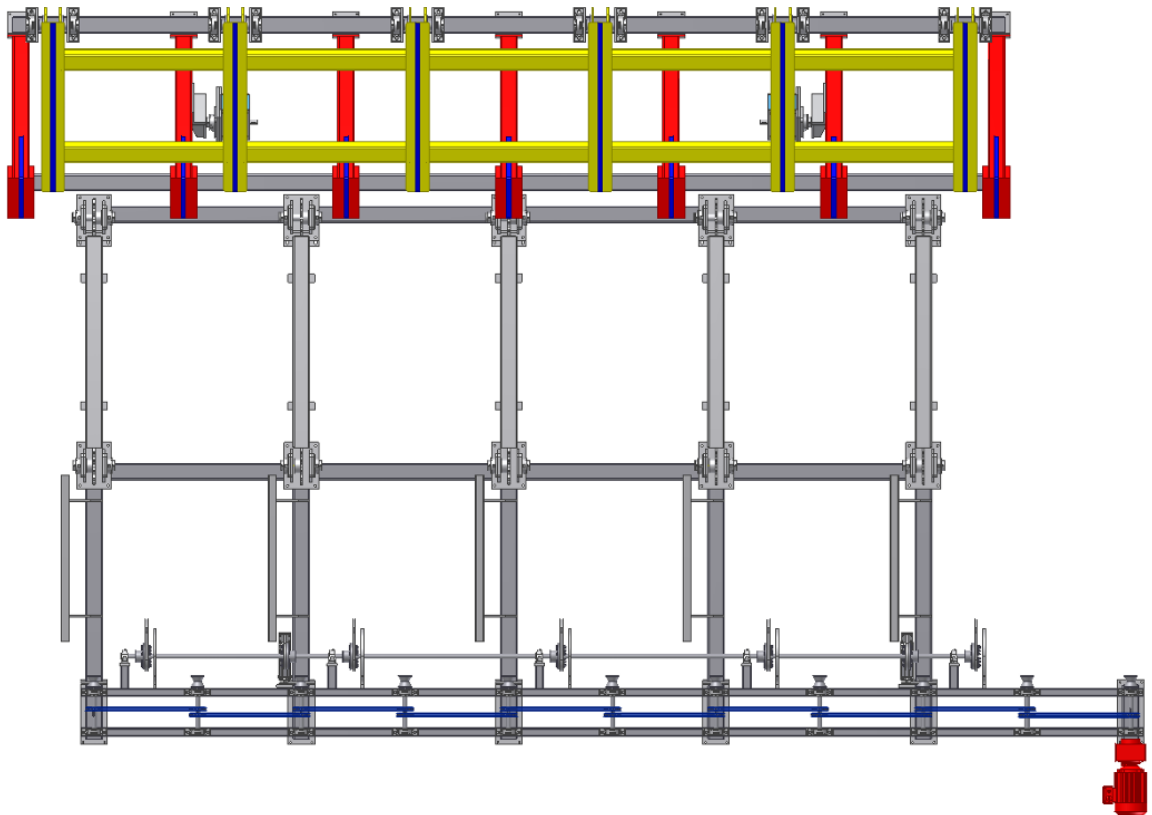
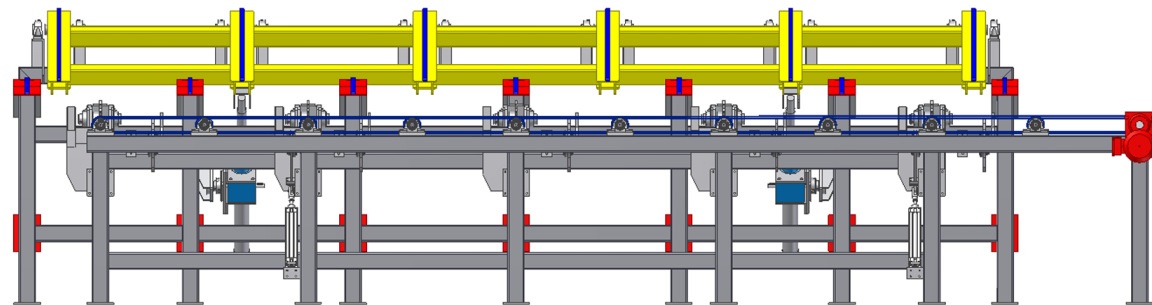


## 1) DEĞİRMEN ÇUBUK BESLEME ÜNİTESİ :

Çubuklu değirmenlere otomatik çubuk besleme ünitesi ile farklı ebatlardaki çubuklar hızlı ve güvenli bir şekilde beslenebilir. Mobil bir ünite olduğu için taşınması kolaydır. Ağırlık tartımı özelliği sayesinde değirmene beslenen çubuk miktarı geriye dönük takip edilebilir.



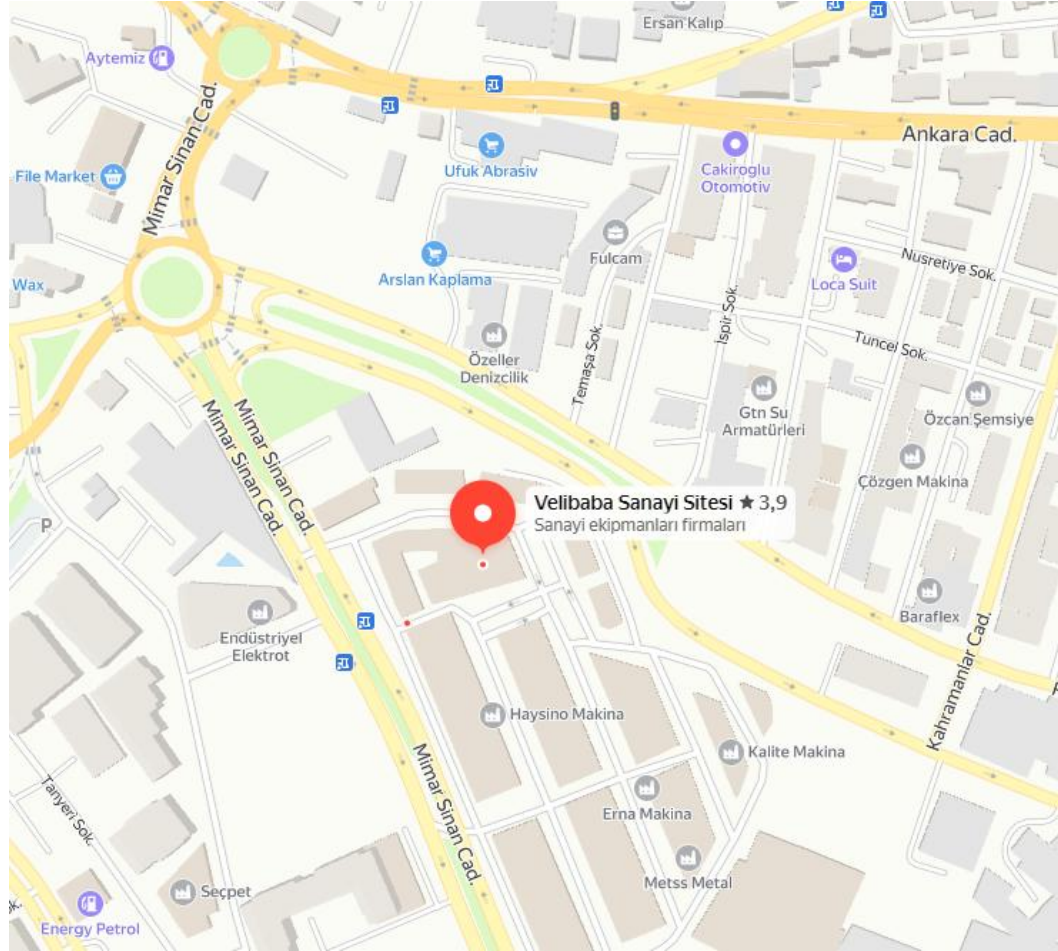
# AUTOMATIC ROD FEEDING SYSTEMS FOR MILLS



We offer suitable to rod mill location and platform arrangement, tailor made rod feeder stations for your mills.



# YOUR SOLUTION PARTNER FOR SPARE PARTS AND GRINDING MEDIA HANDLING



## CENTERCONE MACHINERY INDUSTRY AND TRADE LIMITED COMPANY

**Main Office & Workshop** ; Velibaba mahallesi, Mimar Sinan Caddesi, Velibaba Sanayi Sitesi, F Blok No:9 Pendik, İstanbul

**Email** : [info@centercone.com](mailto:info@centercone.com); [sales-mx@centercone.com](mailto:sales-mx@centercone.com) **Tel** : +90 535 566 48 00 / +90 544 762 48 09